

The analysis of financial factors should be conducted in four primary parts, namely: (1) parent only, (2) banking subsidiary(ies), (3) nonbank subsidiary(ies), and (4) consolidated organization. In view of the fact that all BHCs are not structured in the same organizational and financial manner, it is important that examiners be flexible in their approach and be judicious in their use of ratio analysis and peer group comparisons. There is no substitute for using sound judgment and creativity while performing an analysis, providing all of the pertinent information is available. The summary and conclusions should follow from the information presented in the analysis.

The analysis is intended to determine the financial strengths and weaknesses of an organization and the impact of conditions at the parent company and nonbank subsidiary which could adversely affect the condition of the banking subsidiary. As a regulatory agency, a goal of the

Federal Reserve System is to safeguard and protect the soundness of commercial banks. The System oversees holding company banking and nonbanking activities to assure the continued safety and soundness of individual banks and the industry as a whole.

The analysis of financial factors resulting from the inspection of a bank holding company is essentially a finding of facts and an expression of judgment. In conducting an appraisal of a holding company's condition, the financial analysis of the organization, based on a "building block" or "component" approach, should provide the examiner with a solid foundation from which to proceed. In order to complete the analysis it is first necessary to accumulate sufficient information concerning the parent company, bank and nonbanking subsidiary(ies) and the consolidated organization. A final analysis should not be attempted until these integral parts have been thoroughly reviewed.

4010.0.1 INTRODUCTION AND SCOPE OF THE ANALYSIS

The cash flow analysis is *applicable to all bank holding companies with consolidated assets in excess of \$1 billion, those that have substantive fixed charges or debt outstanding*, as well as select others at the option of the Reserve Bank. Key parts of the analysis involve the use of:

1. A standardized “Cash Flow Statement (Parent)” page (refer to manual sections 5010.23 and 5020.13 for the illustrated pages) which includes computation of the cash earnings coverage ratios and analyses; regarding the results;
2. Earnings cash flow coverage ratios to measure the parent company’s ability:
 - a. To pay its fixed charges, including interest costs, lease expense, income taxes, retirement of long-term debt (including sinking fund provisions), and preferred stock cash dividends, and
 - b. To pay common stock cash dividends.
3. Guidelines for supervisory determination of parent company debt servicing capacity.

The cash flow statement page of the inspection report presents the cash earnings and the cash expenditures of the parent company. Within the statement are the key components to be used in the “Fixed Charge Coverage Ratio,” which measures the parent company’s ability to meet its fixed obligations, and a “Common Stock Cash Dividend Coverage Ratio” which measures the ability of the remaining, or residual, earnings to cover common stock dividends.

4010.0.2 CASH FLOW STATEMENT

The cash flow statement is an effective tool used in understanding how a particular bank holding company operates. Its primary objective is to summarize the financing and investing activities of the holding company, including the extent to which the entity has generated funds (externally and internally) during the period. The cash flow statement is related to both the income statement and the balance sheet and provides information that otherwise can be obtained only partially by interpreting each of those statements.

An analysis of past cash flow statements can supply important information regarding the uses of funds, such as internal asset growth or acquisitions, as well as data on the sources of funds used and the financing needs of management. A

projected cash flow statement will focus on the need for future funds, its applications, and the sources from which they are likely to be available.

Specifically, the analysis of the cash flow statement is necessary for a thorough understanding of a bank holding company and the nature of its operations to the extent that it provides information on such areas as:

1. Utilization of funds provided by operations;
2. Use of funds from a new debt issue or sale of stock;
3. Source of funds used for acquisitions or additional capital contributions;
4. Means of payment of a dividend in the face of an operating loss;
5. Means of debt repayment and stock redemption.

While the cash flow statement provides an overall perspective of a holding company’s utilization of available funds, it does not, by itself, indicate possible or actual difficulties the parent company may have in meeting its fixed obligations from internally generated funds. Fixed obligations or fixed charges are those recurring expenses which must be paid as they fall due, which includes interest expense, lease expense, sinking fund requirements, scheduled debt repayments and preferred dividends.

One ratio that may be used to calculate the strength of a parent company’s earnings to meet its fixed charges or obligations is the *Fixed Charge Coverage Ratio* (FCCR). The components of the ratio are included on the “Cash Flow Statement (Parent)” page. The Fixed Charge Coverage Ratio (FCCR) measures the parent company’s ability to pay for *fixed* contractual obligations if management is to *retain control of the organization*, thereby satisfying the expectation of creditors and preferred stockholders. Net income *after taxes* is used in the formula. Interest and lease expenses are already deducted to arrive at the net income figure and must be added back to obtain the earnings available to pay such charges. Interest expense is usually the largest component among all “fixed charges,” and the ability to pay this expense from earnings cash flow is critical to an assurance of continued refunding of the parent company’s debt. It measures not only the extent to which net cash operating earnings covers the debt servicing requirements of the parent company, but the capacity to pay income taxes and preferred stock

cash dividends as well, thereby meeting the expectations that creditors and preferred shareholders have for the protection of their respective interests. The need for *better than a 1:1* coverage is therefore critical.

Another important formula, required to be calculated is the *Common Stock Cash Dividend Coverage Ratio* (CSCDCR) which measures the ability of the parent company to pay common stock cash dividends. The CSCDCR will show, in turn, whether the residual cash earnings of the parent company are sufficient to pay the common stock cash dividend and, if not, the amount that must be provided from other sources of cash, such as the liquidation of assets or additional borrowings, to cover the shortfall.

Significant shortfalls in the CSCDCR are to be scrutinized in light of the Board's November 1985 Policy Statement on "Cash Dividends Not Fully Covered by Earnings." According to the statement, a bank holding company should not maintain its existing rate of cash dividends on common stock unless:

1. The holding company's net income available to common stockholders over the past year has been sufficient to fully fund the dividends; *and*

2. The prospective rate of earnings retention appears consistent with the organization's capital needs, asset quality, and overall financial condition.

A bank holding company whose cash dividends are inconsistent with the above criteria is to give serious consideration to cutting or eliminating its dividends. The need for *at least a 1:1 coverage* is therefore critical.

The two ratios¹ are calculated as follows:

$$\text{FCCR} = \frac{\text{After tax cash income (1) + interest expense (2) + lease \& rental expense (3)}}{\text{interest expense (2) + lease \& rental expense (3) + contractual long-term debt retired (4) + preferred stock dividend payments (5)}}$$

$$\text{CSCDCR} = \frac{\text{After tax cash income (1)} - [\text{Contractual long-term debt retired (4) + preferred stock dividend payments (5)}]}{\text{Common Stock Dividend Payments (6)}}$$

Note that the Cash Flow Statement (Parent) page presents only cash items included in the parent's income and therefore the analyst can use its income figures without any need to adjust for noncash items.

Both the Fixed Charge Coverage and the Common Stock Cash Dividends Coverage ratios are considered inadequate at less than 1:1. If a holding company is generating funds which provide at least dollar-for-dollar coverage, no criticism need be made. However, the examiner should be aware that these ratios, as well as others, are merely guidelines and good judgment must prevail. A ratio of 1.02:1 may pass the test, but it is only barely adequate. No criticism may necessarily be warranted for the period covered by the 1.02:1 ratio, but it may be indicative of a deteriorating trend over the past few years. Accordingly, an appropriate comment concerning the trend may be warranted.

When reviewing these ratios, it should be kept in mind that certain components in the numerator can to some degree be altered at the discretion of management. For example, by altering the dividends paid by bank subsidiaries, the amount of funds available to the parent to cover fixed charges can be increased or decreased. For this reason, the fixed charge and funds flow ratios should be analyzed in conjunction with a review of the dividend payout ratios of the subsidiary banks. Cash flow ratios that otherwise appear adequate may be a cause for concern if the banks are paying out dividends that are too high in relation to capital or overall condition. Analysts should evaluate the bank dividend payout ratios in light of the bank's capital and financial condition. Only in this way can the analyst gain a better understanding of the quality of the parent's cash flow and its potential effect on bank subsidiaries.

Ratios of less than 1:1 coverage show that internally generated funds are not sufficient to meet a parent company's needs. In many cases, the examiner may find low coverage ratios yet all fixed charges were paid as agreed. Had they not been, the company would have incurred severe financial difficulties long before the start of the inspection. Therefore, when less than adequate ratios appear and obligations are paid

1. The numbered () items correspond to the numbered lines on the "Cash Flow Statement (Parent)" page.

on time, the examiner must determine what other source of funds was utilized to make up the shortfall and to permit the timely payment of obligations.

4010.0.3 SUPERVISORY DETERMINATION AS TO ADEQUACY OF PARENT COMPANY CASH FLOW

A supervisory determination about the adequacy of parent company cash flow, and its use as a measure of parent company debt servicing capacity, requires more information than just the results of the Fixed Charge Coverage and Common Stock Cash Dividend Coverage Ratios. The typical major parent company does not generate an earnings cash flow by conducting banking operations itself, although it nevertheless may incur a heavy external debt on behalf of its operating subsidiaries which are the generators of the actual earnings cash flow. Therefore, the parent company earnings cash flow may not be indicative of the *actual* earnings power of the entire banking organization. For example, the cash earnings of the parent company may be kept low by management to avoid State or local income tax liability and/or to increase leveraged lending volumes at the subsidiary level. Conversely, cash earnings may be forced to the parent company through imprudent levels of upstream cash dividend payments which eventually will endanger the operating subsidiaries and the parent itself.

A supervisory determination about the adequacy of parent company cash flow must take place at *two levels*: (1) by analyzing the results of the two coverage ratios using the net earnings cash flow *realized* by the parent company, and (2) by analyzing the effect that upstream cash flow to the parent company has had, and can be expected to have, on the financial condition of the bank subsidiaries and the significant non-bank subsidiaries. The latter focus should be on significant nonbank subsidiaries whose capital and dividend policies are subject to separate regulation—such as thrifts—or subsidiaries with significant external funding, whose creditors presumably monitor capital and dividend policies of the subsidiary.

4010.0.4 SPECIFIC GUIDELINES FOR DEBT SERVICING CAPACITY

The specific guidelines for debt servicing capacity are as follows:

1. The adequacy or inadequacy of parent

company cash flow, and thereby the capacity to sustain the parent company's debt, is determined ultimately from the results of the Fixed Charge and Common Stock Cash Dividend Coverage Ratios, and the related analysis of the effects of upstream cash flow on the financial condition of the key subsidiaries.

2. For those parent companies with material amounts of long-term debt, coverage ratios in excess of 1:1 will not necessarily be considered sufficient to sustain the parent company's leverage *unless*: *first*, the Tier 1 capital positions of the bank subsidiaries are considered adequate; *second*, that the bank holding company's consolidated Tier 1 capital position is considered adequate; and *third*, the parent's liquidity is judged adequate. If that is not the case, then a critical comment on the "Examiner's Comments" page should be made regarding the potentially excessive leverage of the parent, as well as that of its subsidiaries. A specific period of time should be established for the management of the bank holding company to submit a capital improvement program acceptable to the System. *Moreover*, where the capital positions, bank and consolidated, are considered adequate but the dividend payout ratios are excessive, it is indicative of a potential future debt servicing problem and should be brought to management's attention. Since the earnings level may not be sustainable, corrective action must be taken within a specified period of time.

3. For coverage ratios of less than 1:1, there is a presumption of a critical comment on the "Examiner's Comments" page of the inspection report *unless* the shortfall is prudently planned,² insignificant in amount and/or the trend of earnings cash flow and dividend policies clearly point toward a return to sufficient parent company earnings cash flow coverage.

a. In circumstances where the Tier 1 capital position of *any bank subsidiary* is considered inadequate, a written program of corrective action should be required, including the steps necessary to reestablish positive earnings cash flow coverage at the parent company.

b. In circumstances where the Tier 1 *consolidated* capital position of the holding company is considered inadequate, a written pro-

2. A planned cash flow shortfall might typically occur when the parent elects to reduce (or not increase) dividends from subsidiaries because it anticipated an excess cash or liquid asset position from certain *external sources* (i.e., stock or debt issuance, dividend reinvestment plans, or tax refunds) sufficient to cover the deficiency.

gram of corrective action should be required, including the steps necessary to reestablish positive earnings cash flow coverage at the parent company.

c. In circumstances where the Tier 1 capital position of *each bank subsidiary* and the consolidated Tier 1 capital position of the bank holding company is considered adequate, but there is a developed trend of inadequate earnings cash flow coverage at the parent company level or excessive dividend payouts from the subsidiaries, a written program of corrective action should be required to reestablish and maintain a positive earnings cash flow at the parent company.

4010.0.5 SOURCES OF FUNDS TO MAKE UP SHORTFALLS

Basically, there are three source categories, other than current earnings, that could be used to make up any deficit: (1) liquidation of assets, (2) proceeds from a stock offering, or (3) borrowed funds. These sources must be thoroughly analyzed to determine the extent they were and could still be utilized. It must be kept in mind that the use of these sources cannot permanently eliminate a shortfall in the flow of funds from current operations. These alternative sources only alleviate temporarily the effects of a shortfall. Nevertheless, a deficit could have been intentionally allowed to occur because the holding company knew of funds coming from these alternate sources. For example, the parent knew of an impending stock sale and cut dividends from subsidiaries significantly. In future years, dividends from subsidiaries could be restored to normal proportions, bringing the ratios up to adequate levels.

At this point, it must be determined what, if any, criticism is necessary when an unplanned shortfall is made up by any of these alternate sources. The necessity of liquidating assets to meet cash needs may warrant a critical comment. The parent's advances to subsidiaries and its investment in marketable securities are considered temporary investments. That is, the holding company may reasonably expect to sell its securities and be repaid on its advances to subsidiaries within a reasonably short period of time. In the case of advances to a problem subsidiary, repayments may not be forthcoming. Nevertheless, if the parent does receive partial payments, such funds are available to meet cash

needs. The concern to the examiner is the extent to which such temporary investments can be relied upon before they are fully exhausted. If the continued liquidation of those investments to meet cash needs has fully exhausted the assets or will do so in the near future, then appropriate critical comments are warranted. Such comments should stress that the liquidation of the investment portfolio and the advances to subsidiaries can no longer be considered a reliable source of funds.

Another method which may be used by a holding company to overcome a flow of funds deficiency is the sale of capital stock which is an effective source for generating permanent funds for the parent. However, it must be recognized that the primary reason for the stock offering was something other than covering the shortfall (i.e., debt repayment, capital contributions to subsidiaries, acquisitions). Therefore, it cannot be relied upon as a consistent annual source to supplement internally generated funds from operations. Also, it should be realized that the sale of stock will increase future funding requirements as additional dividends will have to be paid. Consequently, where no significant improvement in internal operations is contemplated in future periods, an appropriate comment is warranted indicating the potential problem.

Holding companies also compensate for inadequate funds flow with borrowed money. Although not a permanent source of funds, long-term debt is a source similar to the sale of stock. Its main purpose, however, was not to cover the shortfall. Long-term debt cannot be considered as a reliable, consistent annual source, and moreover, its existence creates new funding requirements.

Short-term debt is perhaps the most commonly used source to cover a deficit cash flow from operations and its use is of serious concern from a supervisory viewpoint. Unlike long-term debt and equity issues, short-term borrowings (i.e., bank loans, commercial paper) are readily available to holding companies which can and do rely on this source year after year for support. As a consequence, this indebtedness increases fixed charges and where material improvement in earnings does not develop, the shortfall could increase in subsequent periods thereby necessitating even larger borrowing requirements. This practice may jeopardize the parent's liquidity position since short-term liabilities rise without a corresponding increase in liquid assets as the borrowed funds are used to pay expenses. Here, an appropriate comment is warranted indicating the problems.

4010.0.6 REPORTING THE RESULTS

If the coverage ratios are less than 1:1, then appropriate comments are necessary to explain the external source utilized to make up the shortfall. The supporting details may be shown within the comments section of the Cash Flow Statement. More significant comments should be included on the “Analysis of Financial Factors” page or the “Examiner’s Comments” page. The examiner may include prior years’ results for comparative purposes.

4010.0.7 INSPECTION OBJECTIVES

1. To determine the ability of the parent to manage its cash position and operate within debt service and funding requirements.
2. To measure the parent’s ability to meet its fixed obligations and its dependency on borrowed funds to meet its cash needs.
3. To determine if the parent company’s dividends to stockholders are covered by residual cash earnings.
4. To analyze any cash flow transaction which may adversely affect the financial stability of the parent.
5. To discuss with parent company management:
 - a. Deficit cash flows arising from internal operations;
 - b. Steps management has taken, or plans to take, to restore adequate cash earnings coverage for fixed charges and dividend payments and whether such plans should be commensurate with the maintenance of adequate loan loss reserves and Tier 1 capital levels in the bank and major nonbank subsidiaries.
 - c. Any parent company borrowings or restructurings needed to sustain dividend payments to shareholders; and
 - d. The need to increase cash flow although there may be no deficit in current cash flow coverage.

4010.0.8 INSPECTION PROCEDURES

1. Prepare the “Cash Flow Statement (Parent)” FR 1225.
 - a. Analyze each item of the parent company’s comparative balance sheet and income statement. Since accrual figures may be used for all accounts except tax and dividend payments, adjustment to the figures may be necessary for the difference between accrual and cash basis accounting.

- b. Examine the underlying nature of period increases or decreases for the balances listed on the financial statements, particularly any material transactions that aided in averting coverage ratio shortfalls.

- c. Note contractual long-term debt retired (net decrease in borrowed funds, including sinking fund provisions) as a memo item on the bottom of the page, where indicated.

- d. Compute the fixed charge and common stock cash dividend coverage ratios as illustrated on the page. *The numbered items in the formula correspond with the numbered items on the “Cash Flow Statement (Parent)” page.*

- e. Answer the six questions on the “Cash Flow Statement (Parent)” page that prompt an analysis.

2. Analyze the Results.

- a. If there is full coverage, no problem should be assumed. However, *the underlying assets and transactions that provided for the coverage should be examined to make certain that “no problem” does, in fact, exist.*

- b. If a shortfall exists, provide guidelines to the parent company’s management for developing a workable contingency plan, using your “good examiner judgement”, considering the viability of all sources in resolving the shortfall.

- Review the *sources* for making up shortfalls:
 - Liquidation or sale of assets, *giving full consideration to external market concerns and losses that may result from the sales.*
 - Proceeds from stock offerings.
 - Increase in borrowed funds, including a restructuring of short term debt to long term debt.
 - Sale of capital stock.
 - Payments from subsidiaries on advances in the form of amortization or interest.
 - Short term debt.

3. Report the Results.

- a. *When an “engineered” (planned) shortfall exists, indicate that one does exist, the reasons therefore, and the degree of severity to which it should be addressed, either as part of the answers to the questions on the “Cash Flow Statement (Parent)”, the “Analysis of Financial Factors” page, or the “Examiner’s Comments” page. Provide management’s assessment as to*

whether planned short falls will occur in the future.

b. When an *unplanned shortfall exists*, determine the extent of criticism that is to be made when short falls are lessened or corrected by an imprudent use of *alternative sources*.

Based on the severity of the situation, determine whether the comments will be provided in the inspection report as answers to the questions on the Cash Flow Statement, or within the content of the “Analysis of Financial Factors” page, or the “Examiner’s Comments” page.

BHC financial leverage is the use of debt to supplement the equity in a company's capital structure. It is anticipated that funds generated through borrowings will be invested and earn a rate of return above their cost so that the net interest margin generated will improve the company's net income, providing a higher rate of return on stockholders' equity which has otherwise remained constant. Since no creditor or lender would be willing to extend credit without the cushion and safety provided by the stockholders' equity, this borrowing process is also referred to as "trading on equity." That is, utilizing the existence of a given amount of equity capital as a borrowing base. Stockholders and management often view leveraging as a favorable financial alternative because if owners have provided only a small portion of total financing, much of the financial risk will be borne by the lenders, alleviating the need of the stockholders to assume the total risk. In addition, by raising funds through long-term debt, the owners gain the benefits of maintaining control of the firm with a limited investment rather than diluting existing ownership via the sale of additional capital stock.

There are, however, some unfavorable aspects in this type of financing. As a holding company substitutes debt for equity, keeping its asset size constant, its leverage ratio will increase. The increase in leverage increases the probability that a company may go into default since a larger portion of the income stream generated by earning assets must then be used to meet increased fixed charges (interest expense). (This assumes that increases in future earnings are not anticipated. While earnings may be sufficient to meet fixed interest expenses at the time the debt is issued, it is possible that future earnings will not be sufficient to meet the increased expenses.) In addition, utilization of leverage reduces management flexibility in making future decisions because lenders impose restrictive covenants that may limit future debt issues, limit dividend payments, or impose constraints on specific operating ratios. However, not all of the effects of increased leverage are unfavorable. Additional long-term debt may have the favorable effect of extending maturities on obligations and may improve liquidity.

Leverage ratios measure the contribution of owners compared with the financing provided by lenders. Companies with low leverage ratios generally have less exposure to loss when the economy is in a recession, but they may also have lower expected returns when the economy

booms. Firms with high leverage ratios run the risk of large losses but also have a chance of earning high rates of return on equity and assets. Thus, if a company earns more on the borrowed funds than it pays in interest, the return to the owners is increased. For example, if the company earns 10 percent on assets and debt costs 8 percent, there is a 2 percent differential accruing to the stockholders. However, if the return on assets falls to 7 percent, the differential between that figure and the cost of debt must be made up from total profits.

A bank holding company is composed of at least two tiers, parent and subsidiary, and each tier may issue long-term debt in its own name. Several different types of long-term debt instruments are utilized by holding companies. Corporations make use of instruments such as debentures, convertible debentures, term loans, capital notes and mortgage notes. (See Manual section 2080.0—"Funding"). While most issues are generally sold to the public, in some cases, issues of subsidiaries have been placed directly with another subsidiary, the parent company, or perhaps with an unaffiliated banking institution. Alternatively, issues presently held on the books of the parent may have been originally issued by one of the subsidiaries and later transferred to the parent. These transfers have often occurred at the time of the formation of the holding company when debt of the subsidiaries was assumed by the parent.

The proceeds of parent company long-term debt may be advanced to banking subsidiaries as debt or invested in banking subsidiaries as equity. When parent debt is issued, and the proceeds are advanced to subsidiaries as debt, a condition of "*simple leverage*" exists. When such proceeds are invested in subsidiaries as equity, a condition of "*double leverage*" is said to exist since the increase in the subsidiary bank's capital base will allow the bank to increase its own borrowings.¹ In effect, the

1. Parent company "*total leverage*" may be defined as the relationship between equity at the parent level and the total assets of the parent company. Such assets typically consist of investments in bank and nonbank subsidiaries, advances to affiliates, deposits with bank affiliates and securities. A useful related measure of parent company leverage is "*investment leverage*" which may be defined as the relationship between parent equity and its equity investments in subsidiaries. Since the equity which has been invested in subsidiaries can, and often is, further leveraged by external borrowings of such subsidiaries, this type of parent company investment leverage can lead to what is referred to as "*double leverage*."

parent's capital injection which was funded by debt, provides the bank with greater debt capacity, thereby allowing the bank to borrow additional funds on its own. Therefore, the original borrowing by the parent has, in effect, been compounded when the bank borrows based on its newly injected equity.

If the parent debt is reinvested as equity in a bank, the servicing of interest and principal is usually provided by dividends paid to the parent by the bank subsidiaries. The bank dividends, however, may become restricted based on the bank's earning power which may not provide for sufficient retention of earnings to support its asset growth. Problems may be less severe when parent debt is downstreamed as debt to the bank subsidiary. When the terms and maturities of the indentures match, the obligation of a bank to meet its interest and principal payments to the parent are contractual and represent fixed charges (interest is tax deductible) which will continue up to the maturity of the note. When funds are downstreamed as equity and the bank typically issues dividends to its parent, it is easier to restrict the flow of funds from the bank than if the funds were downstreamed as debt which results in bank payments of interest expense. Bank dividend declarations are subject to limitations imposed by sections 5199(b) (12 U.S.C. 60) and 5204 (12 U.S.C. 56) of the United States Revised Statutes, while interest payments are not subject to such restrictions.

4010.1.1 ACQUISITION DEBT

Some holding companies use debt for the acquisition of subsidiary banks. The Board believes that a high level of acquisition debt can impair

the holding company's ability to act as a source of strength to its bank subsidiaries, and thus does not favor the use of a substantial amount of acquisition debt in bank holding company formations. However, the Board recognizes that the use of acquisition debt in the formation of certain holding companies may be necessary, particularly when transferring the ownership of small community banks (approximately \$150 million or less), and the maintenance of local ownership in those banks. To this end, and in the interest of maintaining a safe and sound banking system, the Board has adopted a policy for assessing financial factors in the formation of small one-bank holding companies. (see Manual section 2090.2)

4010.1.2 INSPECTION CONSIDERATIONS

Generally, it is not the examiner's responsibility to criticize the method of term financing used by a bank holding company. The examiner, however, should be familiar with the various types of leveraging and the possible ramifications that they may have on a holding company structure. While the use of ratios may show an excessive leverage position, indicating vulnerability, it is primarily the corporation's earning power that dictates the acceptable level of debt. Accordingly, the examiner should compute a holding company's ability to meet its fixed charges (as detailed in the preceding section) to determine the appropriateness of the leverage position. If the company's earnings do not support the present fixed charge requirements, or if a declining trend is noted, appropriate comments are warranted.

WHAT'S NEW IN THIS REVISED SECTION

This section has been revised to incorporate a reference to the “Liquidity Risk” sections (3005.1 to 3005.5) of the Federal Reserve System’s Trading and Capital-Markets Activities Manual. These sections provide additional guidance on evaluating a banking organization’s liquidity management.

4010.2.1 INTRODUCTION

Liquidity is generally defined as the ability of a company to meet its short-term obligations, to convert assets into cash or to obtain cash, or to roll over or issue new short-term debt. “Short-term” is generally viewed as a time span of up to a year. Since a bank holding company does not have the full range of asset and liability management options available to it that a bank does in managing its liquidity position, a BHC needs to have a sufficient cushion of liquid assets to support maturing liabilities. Certain assets that would not normally be considered current may be readily sold to avert a liquidity squeeze. For example, a holding company may be participating in long-term loans originated by a small business investment company (SBIC) subsidiary. If these loans are of good quality, the parent’s share may be sold at little or no discount to that SBIC subsidiary, another subsidiary, or an unaffiliated company to obtain the needed cash. Consequently, the breakdown of assets segregating those that are current would not necessarily be indicative of liquid assets, given the nature of bank holding company investments. Therefore, liquid assets are defined as those assets that are readily available as cash or that can be converted into cash on an arm’s-length basis without considerable loss.

Liquidity problems are usually a matter of the degree of severity. A less serious liquidity problem may mean that the company is unable to take advantage of profitable business opportunities. A more serious lack of liquidity may mean that a company is unable to pay its short-term obligations and is in default—this can lead to the forced sale of long-term investments and assets and, in its most severe form, to insolvency and bankruptcy. (See SR-86-17 and SR-85-37.) See also the “Liquidity Risk” sections (3005.1 to 3005.5) of the Federal Reserve System’s *Trading and Capital-Markets Activities Manual*. These sections provide additional guid-

ance on evaluating a banking organization’s liquidity management.

4010.2.2 SUPERVISORY APPROACH TO ANALYZING PARENT COMPANY LIQUIDITY

For bank holding companies with consolidated assets in excess of \$1 billion or material amounts of debt outstanding, or others, at the option of the Reserve Bank, the analytical approach to parent company liquidity will include the following key elements:

1. Evaluate parent company liquidity by analyzing the *contractual* maturity structure of assets and liabilities, extending this analysis to consider the underlying liquidity of the parent’s intercompany advances and deposits. Any judgment of *adequate* parent company liquidity must be keyed to a finding that the parent has adequate liquid assets, on an underlying basis, to meet its short-term debt obligations.
2. Estimate the underlying liquidity of parent liabilities and assets, giving particular attention to interest-bearing deposits in and advances to subsidiaries. Emphasis should be placed on asset quality and the liquidity profile of the bank and key nonbank subsidiaries. The estimates are to be reflected in a statement of “Parent Company Liquidity Position” as restated data, with appropriate explanations as to the basis for the restatement.
3. Use the five contractual and estimated underlying maturity categories on the statement of “Parent Company Liquidity Position” to slot in data. The data categories are—
 - a. up to 30 days,
 - b. up to 90 days,
 - c. up to one year,
 - d. one to two years, and
 - e. beyond two years.

The schedule provides for the use of effective remaining maturity categories for the parent company’s short-term assets and liabilities, highlighting funding surpluses or deficits at key specified periods of time. *Examiners have the option of including the statement in the inspection report in order to substantiate or clarify particular judgments.*

4. Use the conclusions drawn from the statement of “Parent Company Liquidity Position” as a basis for discussions with management. Examiners should also comment on their findings in detail on the “Analysis of Financial Factors” page in the inspection report.
5. Ascertaining whether an organization with significant funding activities has in place—
 - a. internal parent liquidity management policies that address and limit the use of short-term funding sources to support various subsidiaries, and
 - b. an internal contingency plan for maintaining parent liquidity under adverse situations.

4010.2.3 STATEMENT OF PARENT COMPANY LIQUIDITY POSITION

The purpose of the statement of “Parent Company Liquidity Position” is to provide a consistent method for analyzing parent liquidity. The schedule is *not* intended to address the issue of interest sensitivity. While only conclusions drawn from the schedule of estimated effective maturities are to appear in the inspection report, examiners should also collect data on contractual (remaining life) maturities of parent assets and liabilities. Examiners will treat all externally funded nonbank entities of the parent company in a similar fashion.

The maturity categories appearing on the schedule are a basic analytical framework for looking at funding mismatches and are not necessarily appropriate for all organizations. As such, categories can be adjusted to fit particular circumstances. On a conceptual basis, the 30-day period corresponds to a period during which markets might be in temporary disarray due to an external shock. For the largest companies with substantial overnight and very short-term funding operations, an additional 1- to 7-day category may be needed. The 31- to 90-day period allows for gauging the parent’s ability to withstand internal adversity and demonstrate a return to “normal” business operations. The 91-day to one-year period is a reasonable planning horizon over which an organization might be able to readjust its internal funding policies substantially. In addition, the up-to-one-year categories, as a group, complement the cash-flow analysis of debt-servicing capacity by specifically addressing maturing debt that must be

either paid or rolled over at prevailing rates. The one- to two-year category provides an early indication of any funding imbalances that management would have to address in the reasonably near term. As a practical matter, the over-two-year category has limited analytical value in most cases and is included principally to make certain that all deposits and advances are accounted for.

Using these categories, funding surpluses or deficits can be identified for specific maturity intervals. For examiners evaluating gaps based on estimated “underlying” maturities, guidelines on acceptable practices for funding surpluses and shortfalls are set. Examiners would be expected to place particular emphasis on the up-to-30-day period, in which a net liquidity surplus would be expected to provide at least that much time for a parent to ride out a shock. Similarly, the up-to-90-day period would be viewed as the relevant time to demonstrate to the market that problems are being addressed appropriately and are being brought under control. Imbalances in the 91-day to one-year categories would generally have less significance due to greater uncertainty regarding the assumptions that would go into any adjustments.

A logical point for assessing parent liquidity is an assessment of the contractual maturity structure of the holding company’s balance sheet. Contractual maturities of assets and normal runoff of liabilities are to be slotted into the five maturity categories depicted. Once completed, the examiner is provided with an initial indication of whether the parent has an adequate cushion of short-term liquid assets within the 0- to 30-day and the 0- to 90-day categories to cover short-term liabilities or whether a pattern of significant short-term funding gaps exists. Certainly, the identification of such gaps gives guidance on obvious areas for further analysis. However, the absence of short-term funding shortfalls on a strictly contractual basis gives only limited comfort, as the parent’s underlying liquidity still must be analyzed more deeply.

4010.2.4 ANALYSIS OF UNDERLYING SOURCES TO FUND DEBT AND MEET OTHER OBLIGATIONS

Adjustments to the schedule that better reflect the parent’s liquidity position will be made as the next step in the analysis. These adjustments require the examiner’s judgment on the underlying liquidity of the parent’s assets and liabilities; particular emphasis placed on interest-

bearing deposits with bank subsidiaries and advances to both bank and nonbank subsidiaries.

4010.2.4.1 Interest-Bearing Deposits with Subsidiary Banks

The parent's interest-bearing deposits¹ with the subsidiary bank(s) may represent either the temporary placement of idle funds or a more permanent source of bank funding. Temporary deposits typically are structured to mature in 90 days or less, are generally not substantial in relation to the overall size of the bank, are usually supported by substantial holdings of highly liquid bank assets, and could be repaid without triggering marketplace concerns regarding the organization's overall funding needs. Therefore, if this pattern exists, the temporary deposits may be considered highly liquid and slotted in the 0- to 30-day (or 0- to 7-day) period on the schedule, regardless of their contractual maturity dates.

Interest-bearing deposits with the subsidiary bank(s) that serve as a permanent source of bank funds are typically substantial in relation to the size of the bank and are usually placed to fund bank expansion without additional bank borrowings. Here, judgments regarding underlying liquidity should be keyed to the CAMELS ratings on the bank's liquidity and asset quality, as well as reasoned judgments on the bank's ability to liquidate assets or replace the funds in the marketplace through additional borrowings. Asset quality is critical, as it is a leading indicator of bad news that will ultimately pull down earnings and undermine market confidence. As a general principle, the liquidity of the parent's deposits in bank(s) should be no better than the liquidity of the bank(s) and should be subject to downgrading if bank asset quality is suspect. If bank asset quality is worse than fair, the liquidity of these funds should be downgraded. For banks with asset quality rated fair, the parent's deposits might still be considered liquid, but a closer analysis of the particular situation would be warranted.

Under the assumption that the bank's asset quality and liquidity positions do not negatively impact the bank's ability to liquidate or replace these funds, such deposits may be slotted in the 0- to 30-day (or 0- to 7-day for large institu-

tions) period on the schedule, regardless of the contractual maturity. However, if these deposits are substantial, their replacement may trigger market concerns. At this point, the examiner's judgment is necessary to determine an acceptable level at which a portion of the deposits could be replaced in the marketplace without triggering such concerns. A starting point for the examiner should be to evaluate the funding gaps appearing on the contractual maturity schedule with particular attention paid to the 0- to 90-day period (0 to 30 days for large institutions). While it may be impossible for the bank(s) to replace all the parent's deposits without triggering concerns, the bank(s) may be able to replace only the portion necessary to eliminate the negative cumulative funding gap in the given time period. If even this amount is deemed to be substantial, the examiner may have no other alternative but to treat the deposits in accordance with the contractual maturity. For clarification, the following example is provided.

The contractual maturity schedule of a large holding company reflects a negative cumulative gap of \$400 million in the 0- to 30-day time frame. The company's balance sheet includes \$2.5 billion in interest-bearing deposits at the subsidiary bank(s), with \$1 billion maturing in 30 days and \$1.5 billion in 31 to 90 days.

In the examiner's judgment, the entire \$1.5 billion due in over 30 days qualifies to be slotted in the under-30-day category,² but the bank would face liquidity pressures to replace this amount prior to its original maturity. However, \$400 million, the amount needed to eliminate the negative cumulative gap position, could be replaced by the bank without undue market concern. Therefore, \$400 million from the 31- to 90-day period should be re-slotted in the appropriate under 30-day-period.

4010.2.5 ADVANCES TO SUBSIDIARIES

Given the typical composition of bank holding company assets, the examiner is likely to have difficulty determining the degree of liquidity inherent in advances to subsidiaries.

For those subsidiaries with satisfactory asset quality, the examiner can usually assume the subsidiary could sell qualifying assets to affil-

1. In concept, the parent could also have advances to bank subsidiaries. Such advances are either booked as deposits (typically off-shore time deposits to avoid reserve requirements) or as instruments qualifying as tier 1 or tier 2 capital. To the extent that advances to banks are encountered, the analysis follows the same approach used with deposits.

2. Subject to early withdrawal penalties, which will be eliminated in consolidation.

ate bank(s) up to the quantitative limitations of section 23A, as long as the affiliated bank(s) are judged to have adequate liquidity. The examiner can also assume that a subsidiary that has an established program of secondary-market asset sales could at least continue or even modestly expand the scope of the program. For subsidiaries without a program of asset sales, but whose assets are of the type that are readily marketable in the secondary market, a *limited* asset-sale program could be considered to provide some asset liquidity. However, caution should be used in estimating the magnitude of such sales, particularly because large transactions could not be accomplished quickly without risking market visibility and without broadcasting concerns about the corporation's funding.

When nonbank advances are substantial, the parent has little or no practical access to the funds advanced. While an arm's-length sale of such a subsidiary or a large portion of its assets to a bank affiliate may not generate a loss, the funding requirements for a large transaction at the bank level would probably initiate marketplace concerns.³ Similarly, asset sales to an unaffiliated party that are significantly above normal would not only trigger market concerns but would probably also result in a significant discount. Furthermore, although it is possible that another nonbank subsidiary may act as the funding vehicle, the subsidiary's ability to generate the required funds may be restricted at best. Such restrictions may include marketplace concerns, as well as limitations on the maximum leverage positions or on the creation of senior debt embedded in debt covenants.

Advances to a subsidiary may be either short term or long term and are made for a variety of reasons, including providing a temporary source of income for the parent, enhancing a subsidiary's liquidity position, and supporting a subsidiary's operations. Therefore, the purpose of the loan, its maturity, and the degree to which high-quality assets of a subsidiary cover the amount due to the parent should also be considered in order to properly categorize advances.

4010.2.6. LIQUIDITY AND LIABILITIES OF THE PARENT

For liabilities of the parent, the policy presump-

tion should be that their contractual maturity reflects the underlying availability of funds. Exceptions will reflect special circumstances, such as funding from foreign ownership interests or partners in joint ventures who have equity interests and an ongoing business relationship. The presence of backup lines of credit for commercial paper, while especially desirable in the case of regional companies, should not, by itself, cause an examiner to assume that the underlying maturity of a parent's short-term debt is materially longer than its contractual term or that these lines will always be readily available. In fact, organizations experiencing considerable problems, particularly asset-quality and liquidity problems, may find that these facilities are no longer available.

The examiner should thus review backup lines on a case-by-case basis and be aware of any escape clauses in interbank agreements. Specifically, for companies with a composite 3 or worse bank holding company RFI/C(D) rating or lead banks whose asset quality is a declining 3 or worse *or* whose asset quality *and* liquidity are rated 3 or worse, it is recommended that backup lines with "material adverse change" or similar escape clauses *not* be regarded as satisfactory support to an imbalanced parent company funding position.

Furthermore, certain holding companies' liabilities may often include unamortizing debt instruments. The company's ability to retire or replace such issues at maturity should be evaluated as part of the organization's overall liquidity analysis. If management intends to roll over the maturing issues, the evaluation should be based on the company's ability to do so. When debt retirement is the route chosen by management, the examiner's evaluation and judgment should focus on the company's ability to generate the necessary funds, either through asset liquidation or the issuance of equity instruments.

The unamortizing portion of debt issues is to be slotted in the appropriate maturity column of long-term debt. If the maturity of such issues falls due within the 0- to 90-day time frame, the examiner should comment on the organization's ability to replace the maturing issues or retire them by the deployment of funds from other sources in a footnote on the schedule. If the maturity of such debt is longer, the replacement or retirement should be addressed in the corporation's funding plan.

3. Underlying liquidity estimates should follow the approach previously stated for deposits.

4010.2.7 ANALYZING FUNDING MISMATCHES

After adjustments for the underlying liquidity of the parent's interest-bearing deposits and advances to subsidiaries and the underlying maturity of its liabilities, the resulting schedule should provide the examiner with the framework for looking at funding mismatches as a tool for assessing the parent's overall liquidity position. The position may be evaluated by the analysis of the underlying liquidity gaps (appearing on the bottom of the schedule). In the 0- to 30-day time frame, a net positive gap is expected and reflects the parent's ability to ride out a temporary market disarray. Although a negative gap in the 8- to 30-day period may be evident in larger organizations, the overall 30-day interval is expected to be positive. Similarly, for most organizations, the 0- to 90-day period is expected to reflect a positive position, regardless of a shortfall in the 31- to 90-day period. Failure to meet these conditions requires appropriate examiner comments on the "Examiner's Comments" page of the report.

The 91-day to one-year time frame (as well as the 31- to 90-day period for certain larger organizations) is less critical, and negative cumulative funding positions of modest size may be tolerated if the organization has demonstrated an ability to tap the funding markets, has readily available backup lines of credit, has a reasonable earnings-retention policy, has adequate funds-flow coverage, and has other fund-generating programs (such as a dividend reinvestment plan). Judgments on the reasonableness of any imbalances in these longer-term categories should be weighed against the examiners' estimates of the adequacy of these sources. In addition, the examiner should view these longer periods as a reasonable planning horizon over which the organization should be able to readjust its funding policies. These longer periods also provide an early indication of how management may address funding imbalances that may develop.

A significant shortfall in the 91-day to one-year period is expected to be covered by a contingency funding plan. While no single formula for such plans is recommended or possible, each organization needs to address its particular situation and the options it faces. At a minimum, the organization needs to address possible market shocks, whether they are caused by its own actions or by external events. Funding markets should be addressed individually and as a group, both as to their likely resiliency and the particular organization's position within

each market. The viability of contingency sources should be tested periodically. The examiner should review the reasonableness of assumptions and the adequacy of alternative courses as part of the company's liquidity analysis. If no plan exists, a plan acceptable to the corporation's directors should be required. Even if there are no specific concerns, the existence or lack of a plan should be taken into account when assessing management.

In analyzing liquidity, the examiner will encounter the least difficulty when liquid assets equal or exceed short-term liabilities. In those instances, the liquidity position is considered adequate. If the examiner notes a declining trend in the liquidity position, an appropriate comment may be warranted, even though sufficient liquidity exists at that time.

Conversely, the examiner will encounter the most difficulty in analyzing liquidity when liquid assets are not sufficient to cover short-term obligations. When this situation exists, it is not necessarily indicative of an inadequate liquidity position. At that point, the examiner must consider other readily available sources of cash that are not shown on the balance sheet (for example, unused bank lines, dividends from subsidiaries).

Footnotes to financial statements may also play an important role in liquidity analysis. One such footnote may describe indenture restrictions on long-term debt. While a company may temporarily alleviate a liquidity bind by paying off its commercial paper with short-term bank loans, it may be faced with the problem of paying off the bank debt if it is precluded from issuing additional long-term debt.

4010.2.8 REPORTING THE RESULTS OF THE ANALYSIS

In the normal course of the inspection, the examiner should present his conclusions concerning liquidity to management. When there is an indication of some vulnerability, the examiner should solicit management's opinion and any corrective action plans being considered. If it appears that management has not addressed itself to the vulnerable or inadequate situation, an appropriate comment should be made. The results of this analysis should be discussed in the parent company section on the "Analysis of Financial Factors" page in the inspection report. In addition, the examiner has the option of incorporating the liquidity schedule in the report

in order to substantiate or clarify particular judgments. Criticism with respect to a liquidity shortfall anywhere within the 0- to 90-day time frame or, in most cases, the absence of a contingency plan to cover shortfalls in the under-one-year time frame, should be carried forward to the “Examiner’s Comments” page and the transmittal letter. These concerns should also be discussed with management.

- a. internal parent liquidity management policies that address and limit the use of short-term funding sources to support subsidiaries, and
 - b. an internal contingency plan for maintaining parent liquidity in the face of adversity.
6. To draw conclusions from the estimated remaining effective maturities that appear in the report.

4010.2.9 INSPECTION OBJECTIVES

1. To analyze the contractual maturity structure of assets and liabilities, and then extend the analysis to the underlying liquidity of inter-company advances and deposits—considering whether the underlying liquidity is short term or long term.
2. To estimate the underlying liquidity of parent liabilities and assets, paying particular attention to interest-bearing deposits in and advances to subsidiaries. Give particular attention to—
 - a. asset quality, and
 - b. the liquidity profile of the bank and key nonbank subsidiaries.
3. To restate, on the “Parent Company Liquidity Position” report page (see section 5030.0, pages 33–34), the estimates, using the suggested five broad contractual and underlying maturity categories.
4. To judge the adequacy of parent company liquidity, keying it to a finding as to whether the parent has adequate liquid assets, on an underlying-liquidity basis, to meet its short-term debt obligations.
5. For BHCs that have significant funding activities at the parent level, to determine if the parent company has in place—

4010.2.10 INSPECTION PROCEDURES

1. Assess the contractual maturities of the parent company’s balance sheet.
2. Slot the contractual maturities of assets and the normal runoff of liabilities into the five categories on the “Parent Company Liquidity Position” report page.
3. On the schedule, make adjustments as to the underlying maturity of the parent company’s assets and liabilities.
4. Review funding mismatches.
5. Review the reasonableness of the contingency plan’s assumptions and the adequacy of alternative sources.
 - a. If no plan exists, a plan acceptable to the corporation’s directors should be required.
 - b. Even if there are no specific concerns, the existence or lack of a plan should be taken into account when assessing management.
6. Discuss the results in the parent company section of the “Analysis of Financial Factors” page in the inspection report.
7. Include in the “Examiner’s Comments,” page 1, criticism of liquidity shortfalls within the 0- to 90-day period or the absence of a contingency plan to cover shortfalls in the under-one-year time frame that were discussed with management.

WHAT'S NEW IN THIS REVISED SECTION

Effective January 2011, this section was revised to provide an introduction to the principal areas of concern when examining a bank, such as the CAMELS components.

In making the determination as to the condition of the holding company under inspection, an examiner must, as part of the inspection procedures, analyze the financial condition of the bank(s) owned by the holding company. Such an appraisal is obviously of paramount importance when one considers that the bulk of the consolidated assets and earnings of a holding company are represented by the bank(s). The examiner must incorporate in the analysis, results of the most recent commercial examination of the subsidiary bank(s).

Therefore, for meaningful results, the analysis of the subsidiary bank(s) should commence after the results of the latest examination of the bank(s) have been obtained. The primary areas of concern are (1) the quality and adequacy of the bank's capital (C); (2) the quality of the bank's assets (A); (3) the capability of the board of directors and management (M) to identify, measure, monitor, and control the risks of the bank's activities and to ensure that the bank has a safe, sound, and efficient operation that is in compliance with applicable laws and regula-

tions; (4) the quantity, sustainability, and trend of the bank's earnings (E); (5) the adequacy of the bank's liquidity (L) position; and (6) the bank's sensitivity (S) to market risk—the degree to which changes in interest rates, foreign-exchange rates, commodity prices, or equity prices can adversely affect the bank's earnings, capital, and liabilities that are subject to market risk. See SR-96-38, “Uniform Financial Institutions Rating System,” and section A.5020.1 in the *Commercial Bank Examination Manual*. The examiner's analysis of the bank must consider and determine whether certain key facets of a bank's operations meet minimum standards and conform, where required, to bank regulatory restrictions. The examiner should be especially alert to any exceptions or violations of applicable statutes or regulations that could have a materially adverse effect upon the financial condition of the organization. In addition, the examiner should also consider the conclusions drawn as to the extent of compliance and the adequacy of internal bank policies that contribute to the overall analysis of the bank's condition.

Inspection personnel should use the examination ratings of the other federal agencies (where appropriate) when completing the inspection report. However, if substantive differences of opinion exist as to the bank's composite rating, adjustments to the rating may be made and footnoted to indicate the change.

One area of vital importance in the evaluation of a bank's condition is capital adequacy. Consideration should be given by the examiner whether the bank has sufficient capital to provide an adequate base for growth and a cushion to absorb possible losses, thereby providing protection to depositors. In that regard, the Board,

has adopted capital adequacy guidelines, that include risk-based and leverage measures which apply to state member banks. The examiner should refer to section 3020.1 of the *Commercial Bank Examination Manual* for guidance on evaluating the capital adequacy of state member banks.

WHAT'S NEW IN THIS REVISED SECTION

Effective January 2011, this section was revised to more clearly explain the components in calculating the total classification ratio and the weighted classification ratio, which are used in determining the asset quality of subsidiary banks. This section was also revised to include references to SR-93-30 and SR-96-38.

The quality of a bank's assets is another area of major supervisory concern. Supervisors consider the appraisal and evaluation of a bank's assets to be one of the most important examination procedures. It will be established by the bank examiner during the examination of a subsidiary bank to what degree its funds have been invested in assets of good quality that afford reasonable assurance of ultimate collectability and regularity of income. The examiner should have further determined that a subsidiary bank's asset composition is compatible with the nature of the business conducted by the bank, the type of customer served, and the locality. The holding company examiner is expected to comment upon the total classifications determined by the bank examiner in relation to the bank's capital.¹ Consideration should also be given to the severity of the classifications. If the classified assets are considered not to possess a significant loss potential, favorable consideration should be accorded this factor.

Past due ratios should also be evaluated. In this respect, it is essential that trends be observed. Although a particular lending department's delinquent outstandings or an institution's overall past due percentage is presently considered reasonable, a noticeable upward trend may be worthy of comment to management. Excessive arrearages in any area warrant an examiner's comment in the inspection report. Management should take appropriate action to improve any undesirable past due levels.

In determining an organization's asset quality, the total classification ratio is an important

indicator to review. The total classification ratio is calculated by adding the total dollar value of classified assets divided by the sum of tier 1 risk-based capital plus the allowance for loans and lease losses (ALLL). Another yardstick employed by examiners is the weighted classification ratio, which takes into consideration the severity of a bank's classified assets. In rating asset quality, the weighted classification ratio is designed to distinguish the degree of risk inherent in classified assets by ascribing weights to each category of classification thereby providing another measure of the impact of risk on bank capital.

The following weights are to be used:

<i>Classification</i>	<i>Weights</i>
Substandard	20%
Doubtful	50%
Loss	100%

The weighted classification ratio is calculated by taking the aggregate of 20 percent of assets classified substandard and value impaired (net of allocated transfer risk reserve), 50 percent of doubtful, and 100 percent of loss divided by the sum of tier 1 risk-based capital plus the ALLL. In addition to the total and weighted classification ratios, examiners should also evaluate the adequacy of loan loss valuation reserves as compared to weighted classifications. Loss potential inherent in weighted classified assets must be offset by valuation reserves and equity capital or appropriate comments should be made.

Another tool that should be considered in evaluating asset quality is the bank's internal classification list, if the bank's lending procedures and management are adequate. Additional information on rating a bank's asset quality is available in the Uniform Interagency Bank Rating System. See SR 96-38, "Uniform Financial Institutions Rating System," and section A.5020.1 in the *Commercial Bank Examination Manual*.

1. See SR-93-30, specifically the attachment entitled, "Interagency Statement on the Supervisory Definition of Special Mention Assets." See also SR-04-9 on the attached "Revised Uniform Agreement on the Classification of Assets and Appraisal of Securities Held by Banks and Thrifts," which defines classified assets.

WHAT'S NEW IN THIS REVISED SECTION

Effective January 2016, this section was revised to include footnote 1.

Comparison of earnings trends with other banks of similar size, along with an analysis of the quality of those earnings, is an effective initial approach in determining whether or not a bank's earnings are satisfactory. Comprehensive surveys of bank earnings by peer group size are tabulated by the Board and many of the Reserve Banks. The results are sufficiently detailed to permit various methods of comparison of the earnings of a specific bank with those in its peer group.

One ratio used as a means of measuring the quality of a bank's earnings is its return on average assets (net income after taxes divided by average total assets). If the ratio is low or declining rapidly, it could signal, among other things, that the bank's net interest income or margin is declining or that the bank is experiencing increased loan losses.

A bank's current earnings should be sufficient to allow for ample provisions to offset anticipated losses. Various factors to be considered in the determination of such losses include a bank's historic loss experience, the adequacy of the valuation reserve, the quality and strength of its existing loans and investments and the soundness of the loan and administrative policies of management.

In assessing a bank's earnings performance capabilities and the quality of those earnings, an examiner should give consideration to any special factors that may affect a particular bank's earnings. For example, a bank located in an urban area of a large city may find it difficult to earn as much as a bank of similar size located in a rural community or a small city. The urban bank is usually subjected to a higher level of operating expenses, particularly in salaries and local taxes. Moreover, its proximity to the large city and the competition afforded by bigger banks may necessitate lower rates of interest on loans as well as higher rates of interest on deposits. Consideration should also be given to the adequacy of the loan loss provisions as referred to above, the inclusion of any capitalized accrued interest into interest income, or the nature of any large nonoperating gains when

analyzing earnings. Further consideration should be given to the general nature of a bank's business or management's mode of operation. A bank's deposit structure and its resulting average interest paid per dollar of deposits may differ widely from that of other banks of a similar size and consequently, its earnings may be substantially below average as a direct result of the difference. For example, the maintenance of a high volume of interest bearing time accounts in relation to total deposits is a major expense and is quite often the cause for certain banks falling below the average earnings of comparably sized banks.

A bank's earnings should also be more than sufficiently adequate in relation to its current dividend rate. It is particularly important that a bank's dividend rate is prudent relative to its financial position and not be based on overly optimistic earnings scenarios. See SR-09-4, "Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies."¹ Also see section 2020.5 and its discussion of the Board's "Policy Statement on the Payment of Cash Dividends by State Member Banks and Bank Holding Companies."

The percentage that should be retained in the capital accounts is not clearly established. One thing is certain, the need for retained earnings to augment capital will depend on the adequacy of the existing capital structure as well as the bank's asset growth rate. Dividend payout rates may be regarded as exceeding prudent banking practices if capital growth does not keep pace with asset growth. Prudent management dictates that a curtailment of the dividend rate be considered if capital inadequacy is obvious and greater earnings retention is required. Apparently excessive dividend payouts or a record of recent operating losses should lead the bank or BHC examiner to refer to sections 5199(b) and 5204 of the United States Revised Statutes and

1. SR-09-4 is superseded for a U. S bank holding company or an intermediate holding company of a foreign banking organization with \$50 billion or more in total consolidated assets as stated in SR-15-18, "Federal Reserve Supervisory Assessment of Capital Planning and Positions for LISCC Firms and Large and Complex Firms," and SR-15-19, "Federal Reserve Supervisory Assessment of Capital Planning and Positions for Large and Noncomplex Firms."

section 208.19 of Regulation H which restrict state member bank dividends.

Analysis of net interest margins is of growing importance. A comparison should be made of a bank's ability to generate interest income on earning assets relative to the interest expenses associated with the funds used to finance the earning assets.

Additional information on rating bank earnings is available in the Uniform Interagency Bank Rating System. See SR-96-38 "Uniform Financial Institutions Rating System," and section A.5020.1 in the *Commercial Bank Examination Manual*.

WHAT'S NEW IN THIS REVISED SECTION

This section has been revised to incorporate a reference to the “Liquidity Risk” sections (4020.1 to 4020.4) of the Federal Reserve System’s Commercial Bank Examination Manual. This section has also been revised to include a reference to the March 2010, “Interagency Policy Statement on Funding and Liquidity-Risk Management.”

Liquidity is generally defined as the ability to meet short-term obligations, to convert assets into cash or obtain cash, or to roll over or issue new short-term debt. Various techniques are employed to measure a bank’s (depository institution) liquidity position. The bank examiner considers the bank’s location and the nature of its operations. For example, a small rural bank has far different needs than a multibillion dollar money market institution.

In addition to cash assets, a bank will hold for liquidity purposes a portion of its investment portfolio of securities that are readily convertible into cash. Loan and investment maturities are generally matched to certain deposit or other liability maturities. However, the individual responsible for a bank’s money management must be extremely flexible and have alternate means to meet unanticipated changes in liquidity needs. To offset these needs, other means of increasing liquidity may be needed, which might include increasing temporary short-term borrowings, selling longer-term assets, or a combination of both. Factors that the “money management” officer will consider include the availability of funds, the market value of the saleable assets, prevailing interest rates and the susceptibility to interest-rate risk, and the bank’s earnings position and related tax considerations. Although most small banks may not have a “money manager,” they too must monitor their liquidity carefully.

One of the most common methods used by large banks to increase liquidity is to use additional borrowings. Some of the other basic means of improving liquidity include the use of direct short-term credit available through the discount window from Reserve Banks, the use of Federal funds purchases, and the use of loans from correspondent banks.

4020.4.1 SOUND LIQUIDITY-RISK MANAGEMENT

All banks are affected by changes in the economic climate, and the monitoring of economic and money market trends is crucial to liquidity planning. Sound financial management can minimize the negative effects of these trends while accentuating the positive ones. Sound liquidity-risk management requires the following elements:¹

- Effective corporate governance consisting of oversight by the board of directors and active involvement by management in an institution’s control of liquidity risk.
- Appropriate strategies, policies, procedures, and limits used to manage and mitigate liquidity risk.
- Comprehensive liquidity-risk measurement and monitoring systems (including assessments of the current and prospective cash flows or sources and uses of funds) that are commensurate with the complexity and business activities of the institution.
- Active management of intraday liquidity and collateral.
- An appropriately diverse mix of existing and potential future funding sources.
- Adequate levels of highly liquid marketable securities free of legal, regulatory, or operational impediments that can be used to meet liquidity needs in stressful situations.
- Comprehensive contingency funding plans (CFPs) that sufficiently address potential adverse liquidity events and emergency cash flow requirements.
- Internal controls and internal audit processes sufficient to determine the adequacy of the institution’s liquidity-risk management process.

Information that a bank’s management should consider in liquidity planning includes—

1. internal costs of funds,
2. maturity and repricing mismatches in the balance sheet,

1. See the March 10, 2010, “Interagency Policy Statement on Funding and Liquidity-Risk Management.” (See section 4066.0, appendix A.) See also the guidance published by the Basel Committee on Banking Supervision, Bank for International Settlements, “Principles for Sound Liquidity-Risk Management and Supervision.”

3. anticipated funding needs, and
4. economic and market forecasts.

In addition, bank management must have an effective CFP that identifies minimum and maximum liquidity needs and weighs alternative courses of action designed to meet those needs. Some factors that may affect a bank's liquidity include—

1. a decline in earnings,
2. an increase in nonperforming assets,
3. deposit concentrations,
4. a downgrade by a rating agency,
5. expanded business opportunities,
6. acquisitions,
7. new tax initiatives, and
8. assured accessibility to diversified funding sources, including liquid assets such as high-grade investment securities and a diversified mix of wholesale and retail borrowings.

Adequate liquidity contingency planning is critical to the ongoing maintenance of the safety and soundness of any depository institution. Contingency planning starts with an assessment of the possible liquidity events that an institution might encounter. The types of potential liquidity events considered should range from high-probability/low-impact events that can occur in day-to-day operations to low-probability/high-impact events that can arise through institution-specific or systemic market or operational circumstances. Responses to these events should be assessed in the context of their implications for an institution's short-term, intermediate-term, and long-term liquidity profile. A fundamental principle in designing a CFP that addresses each of these liquidity tenors is to ensure adequate diversification in the potential sources of funds that could be used to provide liquidity under a variety of circumstances. Such diversification should focus not only on the number of potential funds providers but also on the underlying stability, availability, and flexibility of funds sources in the context of the type of liquidity event these sources are expected to address.

See also the "Liquidity Risk" sections (4020.1 to 4020.4) of the Board of Governors of the Federal Reserve System's *Commercial Bank Examination Manual*. These sections provide additional guidance on evaluating a banking organization's liquidity management.

4020.4.2 LIQUIDITY-RISK MANAGEMENT USING THE FEDERAL RESERVE'S PRIMARY CREDIT PROGRAM

The Federal Reserve's primary credit program (a type of discount window lending) offers generally sound depository institutions an additional source of available funds, although such funds are lent for managing short-term liquidity risks (at a rate above the target federal funds rate).² Management should fully assess the potential role that the Federal Reserve's primary credit program might play in managing the institution's liquidity. The primary credit program can be a viable source of very short-term backup funds. Management may find it appropriate to incorporate the availability of the primary credit program into their institution's diversified liquidity-management policies, procedures, and CFPs. The primary credit program has the following attributes that make it a viable source of backup or contingency funding for short-term purposes:

1. Primary credit is extended, with minimal administrative burden, to eligible discount window participants.
2. Primary credit is available only to financially sound depository institutions, as determined by the lending Federal Reserve Bank.
3. Primary credit can enhance diversification in short-term CFPs.
4. Borrowings can be secured with an array of collateral that is acceptable to the lending Federal Reserve Bank, including consumer and commercial loans.
5. Requests for primary credit advances can be made anytime during the day.³
6. There are generally no restrictions on the use of short-term primary credit.

If an institution incorporates primary credit into its CFP, the institution should ensure that it has in place with the appropriate Reserve Bank the necessary borrowing documentation and collateral arrangements. This is particularly impor-

2. The Federal Reserve's secondary credit program provides loans to qualifying depository institutions (for example, those depository institutions that are not eligible for the primary credit program) at an interest rate that is above the primary credit program's interest rate. See section 3010.1 of the *Commercial Bank Examination Manual* and SR-03-15, "Interagency Advisory on the Use of the Federal Reserve's Primary Credit Program in Effective Liquidity Management," for a further discussion of the Federal Reserve's credit programs.

3. Advances generally are booked at the end of the business day.

tant when the intended collateral consists of loans or other assets that may involve significant processing or lead time for pledging to the Reserve Bank.

It is a long-established sound practice for institutions to periodically test all sources of contingency funding. Accordingly, if an institution includes the Federal Reserve's primary and other credit programs, along with borrowing from other lenders, in its contingency plans, management should occasionally test the institution's ability to borrow from all the funding sources covered by the plan. The goal of such testing is to ensure that there are no unexpected impediments or complications in the case that such contingency lines need to be used.

Institutions should ensure that any planned use of primary credit is consistent with the stated purposes and objectives of the program. Under the primary credit program, the Federal Reserve generally expects to extend funds on a very short-term basis, usually overnight. Therefore, as with any other type of short-term contingency funding, institutions should ensure that any use of primary credit facilities for short-term liquidity contingencies is accompanied by viable take-out or exit strategies to replace this funding expeditiously with other sources of funding. Institutions should factor into their CFPs an analysis of their eligibility for primary credit under various scenarios, recognizing that if their financial condition were to deteriorate, primary credit may not be available. Under those scenarios, secondary credit may be available.

Secondary credit is available at a rate above that of primary credit. Secondary credit is available to meet short-term needs (when the borrowing is constant and there is a prompt return to market funding sources) or to resolve financial difficulties. The preparations made by a bank to access primary credit (the documentation and collateral requirements) will also support the borrowing of secondary credit.

Another critical element of liquidity management is an appropriate assessment of the costs and benefits of various sources of potential liquidity. This assessment is particularly important in managing short-term and day-to-day sources and uses of funds. Given the above-market rates charged on primary credit, institutions should ensure that they adequately assess the higher costs of this form of credit relative to other available sources. Extended use of any type of relatively expensive source of funds can give rise to significant earnings implications that, in turn, may lead to supervisory concerns.

It is also important to note that the Federal

Reserve's primary credit facility is only one of many tools institutions may use in managing their liquidity-risk profiles. An institution's management should ensure that the institution maintains adequate access to a diversified array of readily available and confirmed funding sources, including liquid assets such as high-grade investment securities and a diversified mix of wholesale and retail borrowings. (See SR-03-15.)

4020.4.2.1 Supervisory and Examiner Considerations

Because primary credit can serve as a viable source of backup, short-term funds, supervisors and examiners should view the occasional use of primary credit as appropriate and unexceptional. At the same time, however, supervisors and examiners should be cognizant of the implications that too-frequent use of this source of relatively expensive funds may have for the earnings, financial condition, and overall safety and soundness of the institution. Overreliance on primary credit borrowings, or any other single source of short-term contingency funds, regardless of the relative costs, may be symptomatic of deeper operational or financial difficulties. The use of primary credit, as with the use of any potential sources of contingency funding, is an important management decision that must be made in the context of safe and sound banking practices.

4020.4.3 ANALYSIS OF LIQUIDITY

A bank's liquidity must be evaluated on the basis of the bank's capacity to satisfy promptly its financial obligations and its ability to fulfill the reasonable borrowing needs of the communities it serves. An examiner's assessment of a bank's liquidity management should not be restricted to its liquidity position on any particular date. Indeed, the examiner should also focus his or her efforts toward determining the bank's liquidity position over a specific time period. The examiner's evaluation should also encompass the overall effectiveness of the institution's asset-liability management and liquidity risk-management strategies. Factors such as the nature, volume, and anticipated takedown of a bank's credit commitments should also be considered in arriving at an overall rating for liquidity.

If the bank examiner has commented on a

liquidity deficiency at a subsidiary bank, the bank holding company examiner should consider these findings in the overall analysis of financial factors. Additional information on rating a bank's liquidity is available in the Uni-

form Interagency Bank Rating System. See SR-96-38, "Uniform Financial Institutions Rating System," and section A.5020.1 in the *Commercial Bank Examination Manual*.

The condition of a bank provides important insight regarding the quality of bank management. An appraisal of management's performance should be measured in terms of long-term profitability, risk exposure, liquidity, and solvency; all geared toward assuring the bank's continued profitability and overall sound financial condition. Management must meet the bank's challenges and position in the market place among its competitors. It must make plans which will achieve the objectives established by the bank's directors. Management must be constantly alert to the need for continued upgrading and expanding of services and facilities to advance, support, and encourage the bank's growth.

Just as sound management decision making will generally produce banks that are free from serious problems, ineffective management has invariably been a prominent factor in almost every serious problem bank situation. An examiner must consider the degree and severity of problems that exist in the bank under examination and attempt to establish the responsibility for such. The examiner should seek to determine to what degree the bank's problems are attributable to questionable management judgment as opposed to outside factors, such as unfavorable economic conditions.

The major portion of a bank holding company's consolidated assets are held in the bank subsidiaries. Furthermore, at the parent level, the major asset is generally the investment in subsidiaries, the principal portion of which is the investment in the bank(s). Therefore, with few exceptions, it is the overall condition of the bank subsidiaries that reflects the condition of the parent company. As the bank holding company examiner reviews the examination report(s) for each bank subsidiary, a decision must be made with respect to the general condition of each bank. When all the bank subsidiaries have been reviewed, the examiner must put these findings within their proper perspective. For example, if four of five bank subsidiaries comprise less than 10 percent of the combined banking assets, it is the condition of the fifth bank subsidiary that will weigh heavily in the analysis. In other words, if the fifth bank comprises 90 percent of the combined banking assets, the parent's investment in that bank also comprises most of the holding company's assets. Thus, the quality of the parent's assets would be reflected in the general condition of that bank and appropriate comments are warranted. It should be noted, however, that regardless of relative size, a bank experiencing problems should be commented upon in the summary analysis.

4020.9.1 DEFINITION AND SCOPE OF
THE DE NOVO BANK SUPERVISION
POLICY

The term “de novo bank” refers to a state member bank that has been in operation for five years or less. The application and supervision standards for de novo state member banks are found in SR-91-17. De novo state member bank subsidiaries of bank holding companies are subject to those policies. The standards discussed in this section are limited to a de novo subsidiary bank’s financial performance.

The de novo policy also extends to commercial banks that have been in existence for less than five years and subsequently convert to membership. Because thrifts, Edge Act companies, and industrial banks that are converting to membership (“converted banks”) have not demonstrated operating stability as commercial banks, they also are subject to the de novo policy, regardless of how long they existed before the conversion.

The policy applies to de novo banks through the fifth year of operations. Experience has shown that pronounced problems often surface during a new bank’s fourth and fifth years of operation, frequently as a result of inexperienced management, management and director changes, dissension among directors, directors’ lack of involvement, and poor lending practices during the early years.

4020.9.2 CAPITAL STANDARDS FOR
SUBSIDIARY BANKS OF BHCs

De novo subsidiary banks of bank holding companies are expected to maintain capital in conformance with the de novo policy guidelines of SR-91-17. Initial capital in a de novo state member bank should be reasonable in relation to state law, the bank’s location and business plan, and the competitive environment. At a mini-

um, a de novo bank must maintain a tangible Tier 1 leverage ratio of 9 percent for the first three years of operation.¹ The applicant’s (that is, the proposed state member bank’s or the bank holding company’s) initial projections of asset growth and earnings performances should be reasonably in line with the bank’s ability to maintain this ratio without relying on additional capital injections. The de novo policy also applies to newly converted commercial banks through the third year of existence and to other types of institutions that become Federal Reserve members for a three-year period beginning from the date following consummation. Any exceptions to this policy that are being considered for converted banks should be discussed with Board staff. Although a 9 percent tangible leverage ratio is not required after year three, de novo banks are expected to maintain capital ratios commensurate with safety-and-soundness concerns and, generally, well in excess of regulatory minimums.

4020.9.3 CASH FLOWS TO A BHC
PARENT

Under the current policy on small one-bank holding companies (see section 2090.2.3), de novo banks may not provide funds for servicing the parent’s debt until the bank receives two consecutive CAMELS ratings of 1 or 2 based on full-scope examinations and, in the judgment of the Reserve Bank, can be expected to continue operating soundly. An exception to this prohibition is the tax payments that are made in accordance with the Board’s policy under Regulation Y (see section 2070.0 and *FRRS* 4–870).

1. Although this policy applies to a bank holding company’s acquisition of a de novo state member bank, the Federal Reserve also encourages bank holding companies’ nonmember bank subsidiaries to adhere to the same standards.

4030.0.1 INTRODUCTION

Generally, a subsidiary of a bank holding company is not liable for debts of any other subsidiary of the holding company unless it is contractually obligated through guarantees, endorsements, or other similar instruments. This apparent legal separation may induce false confidence that banks are insulated from problems that may befall other subsidiaries of the holding company. If a nonbank subsidiary of a bank holding company finds itself in serious financial trouble, several results are possible. The holding company may work as it was intended, in that debts of the failing subsidiary are isolated and not transferred to other subsidiaries so that at worst, the subsidiary and the parent (the holding company) fail. In this instance, other subsidiaries, including bank subsidiaries, are unharmed, and after a change in management or ownership, they continue in operation. There is no loss of confidence in the bank by its depositors. However, this is not necessarily the result.

Failure of a nonbank subsidiary may lead to a lack of confidence in the affiliated bank's ability to continue in business, which might precipitate a run on the bank's deposits. The failure of a major nonbank subsidiary then may place its affiliated bank in serious financial trouble. The examiner should assess the impact that the failure or the potential failure of a nonbank subsidiary may have on an affiliated bank with a similar name.

Usually, a financially distressed nonbank subsidiary is aided by the holding company, which will do everything in its power to rescue it from failure. At a minimum, refusal to do so would undermine confidence in the strength of the holding company. Refusal to aid its nonbank subsidiary might even result in a rise in the interest cost of the holding company's future debt in the capital markets and, more than likely, preclude issuance of commercial paper.

A holding company has considerable discretion in choosing how to assist one of its troubled subsidiaries. Because the bank is usually the largest subsidiary, the holding company may attempt to draw upon the resources of the bank to aid the nonbank subsidiary. The bank can transfer a substantial portion of its capital through dividends to the parent company, which may pass these funds on to the troubled nonbank subsidiary. Also, the nonbank may attempt to sell part of its portfolio to the bank subsidiary to improve liquidity. The Board's Interpretation 12 C.F.R. 250.250 (at FRRS 3-1133) limits the sale

of nonbank subsidiary loans to the bank affiliate unless the bank had an opportunity to appraise the credit at the inception of the loan. Therefore, the examiner should closely analyze the off-balance-sheet activity of the nonbank subsidiary, particularly activity relating to the sale of loans shortly after they are made. Reference should also be made to section 2020.7, regarding the transfer of low-quality loans or other assets to avoid classification.

4030.0.2 ANALYSIS OF FINANCIAL CONDITION AND RISK ASSESSMENT

Because of the potentially damaging effect on the parent company or its bank subsidiary, the examiner should conduct a detailed analysis of the financial condition and perform a risk assessment of the nonbank subsidiaries. The loss to the holding company may not be confined to the equity in and advances to the subsidiary. The contingent liabilities arising from the nonbank subsidiary's external borrowings are quite often a large multiple of the parent's investment. Particular attention should be directed to holding companies that have made massive capital injections in order to rescue a failing subsidiary or to satisfy the external debt obligations of the subsidiary.

For each bank holding company with nonbank activities, examiners should prepare a written risk assessment of each active nonbank subsidiary, addressing the financial and managerial concerns outlined below.¹ This assessment should be performed with the same frequency required for full-scope inspections. The purpose of this assessment is to identify subsidiaries with a risk profile that warrants an on-site presence, even if the subsidiary does not meet the minimum criteria set forth in section 5000.0.4.4.1, "On-site Reviews of Nonbank Subsidiaries." In formulating this assessment, the examiner should consider all available sources of information including, but not limited to—

- findings, scope, and recency of previous inspections;

1. The assessment of nonbank activities in large, complex organizations may be focused on an intermediate-tier company with oversight responsibility for multiple nonbank subsidiaries.

- ongoing monitoring efforts of surveillance and financial analysis units;
- information received through first-day letters or other pre-inspection communications;
- regulatory reports and published financial information; and,
- reports of internal and external auditors.

The risk assessment should address each non-bank subsidiary's funding risk, earnings exposure, operational risks, asset quality, capital adequacy, contingent liabilities and other off-balance-sheet exposures, management information systems and controls, transactions with

affiliates, growth in assets, and the quality of oversight provided by the management of the bank holding company and nonbank subsidiary. The examiner should give particular attention to appraising the quality of a nonbank subsidiary's assets because asset problems therein may lead to other financial problems in the nonbank subsidiary and the parent company or bank affiliates. Examiners are expected to document in the inspection workpapers their assessment of the overall risk posed by each nonbank subsidiary and to summarize their assessment of nonbank activities in the bank holding company inspection report.

The examiner has four alternatives with respect to asset classifications. An appraisal of the degree of risk involved in a given asset leads to a selection. The examiner can either “pass” the asset or adversely classify the asset “substandard,” “doubtful” or “loss,” depending on the severity of deterioration noted.

Since the preponderance of all loans are subject to some degree of risk, the following question arises: To what point, or degree, must a given credit deteriorate to warrant a scheduled criticism in the report of inspection? Generally, a passed credit has those characteristics which are recognized as being part of a normal risk asset; the degree of risk is not unreasonable, the loan is being properly serviced, and is either adequately secured or repayment is reasonably assured from a specific source.

Classification units are designated as “substandard,” “doubtful,” and “loss.” A substandard asset is inadequately protected by the current sound worth and paying capacity of the obligor or of the collateral pledged, if any. Assets so classified must have a well-defined weakness or weaknesses that jeopardize the liquidation of the debt. They are characterized by the distinct possibility that the nonbank subsidiary will sustain some loss if the deficiencies are

not corrected. An asset classified doubtful has all the weaknesses inherent in one classified substandard with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently existing facts, conditions, and values, highly questionable and improbable. Assets classified loss are considered uncollectible and of such little value that their continuance as recordable assets is not warranted. This classification does not mean that the asset has absolutely no recovery or salvage value, but rather it is not practical or desirable to defer reserving against this basically worthless asset even though partial recovery may be effected in the future.

Although the System does not apply bank standards when classifying nonbank assets, the classification categories are the same. Examiners of BHC nonbank subsidiaries must appraise the assets in light of industry standards and conditions inherent in the market.

For information on classifying a parent’s investment in and advances to a noncredit-extending subsidiary, see Manual section 4070.0, BHC Rating System.

For information on the sufficiency of nonbank valuation reserves, see Manual section 4030.4.

When analyzing the earnings of a nonbank subsidiary, the examiner should address two primary questions: (1) Is the return on assets commensurate with the risk associated with the assets? (2) What is the impact of earnings and trends on the parent company and affiliate banks? While a nonbank subsidiary operating at a loss may be in less than satisfactory condition, the loss may not necessarily result in a major adverse impact on the consolidated earnings. The nonbank subsidiary's total assets may be insignificant in relation to the consolidated assets of the BHC, but operating losses may result in a significant reduction in its consolidated earnings position.

In some cases, industry statistics will be available for comparative purposes. However, a favorable comparison should not necessarily be taken as depicting a satisfactory earnings condition. Actions by the parent company could influence the earnings of its subsidiaries. For example, management and/or service fees can be adjusted in order to alter the subsidiary's earnings to desired levels. Also, if the parent company is funding the subsidiary, the cost of funds to the subsidiary can be adjusted above or below the parent's cost of funds thus affecting net income. In addition, an undercapitalized subsidiary with only a marginal return on assets could show a better return on equity than the adequately capitalized independent counterpart experiencing a good return on its assets. As important as return on equity is as a measure of performance, for nonbank subsidiaries, particularly those that are thinly capitalized, absolute level of earnings or return on assets provide a more meaningful measure of earnings performance.

The cash return to the parent from its investment in and advances to a subsidiary less its costs to carry the assets and related expenses should exceed the cash return available from an investment of a similar amount in securities in order to justify retaining the subsidiary. If it seems that an alternative employment of funds would be more rational, the examiner should inquire as to management's plans to improve subsidiary earnings.

Questions to be answered in analyzing the earnings of credit-extending nonbank subsidiaries include:

1. What is the impact on the parent company and affiliate banks of a nonbank subsidiary operating at a loss?
2. Is the return on assets commensurate with the risk inherent in the asset portfolios for those nonbank subsidiaries operating profitably?
3. Are intercompany management/service fees appropriate? From a supervisory perspective, management and service fees should have a direct relationship to and be based solely upon the fair value of goods and services received.
4. Is the subsidiary required to reimburse the parent for the parent's interest expense on borrowed funds, the proceeds of which have been treated as "advances to subsidiaries?"
5. Is the quality of the subsidiary's earnings sound? For example, is the company understating the provision for loan losses, relying upon nonoperating gains or capitalization of accrued interest?

Special attention should be directed by the examiner to the computation of the company's net interest margin (interest income—interest expense, divided by average earning assets). A study of company yields on investments should provide a measure of the company's ability to invest its funds in earning assets that provide a rate of return above the company's cost of funds. As net interest margins narrow, the company may find it more difficult to generate sufficient income to meet operating expenses.

When discussing growth in earnings, the examiner should clearly differentiate between increases due to increased net interest income on a constant base of earning assets as compared to an increase in the earning asset base with a concurrent proportional increase in net interest income. Any improvement in net interest income as a percentage of earning assets may reflect favorably on management's ability to invest its funds at favorable yields or its ability to find less expensive sources of funds.

As a general rule, credit-extending nonbank subsidiaries are funded by the proceeds of parent company borrowings through instruments such as commercial paper or medium to long-term debt or a combination thereof. Equity generally represents only a small portion of funding resources. There are instances, however, where the nonbank subsidiary will arrange direct funding from external sources. This is especially true in certain States where there are tax advantages associated with direct external funding.

Heavy reliance on borrowed funds by a nonbank subsidiary together with its limited capital position often results in a highly leveraged financial condition that is quite sensitive to changes in money market cost of funds. An examiner should consider what a change in the company's cost of funds might do to its net interest margin and earnings.

Many BHCs operate on the premise that a nonbank subsidiary needs little capital of its own as long as the parent company is adequately capitalized. Implicit in this operating practice is management's belief that the parent could act as a source of financial strength to its subsidiary in the event of difficulty at the subsidiary level. However, experience has indicated that in many cases, once trouble has developed in the subsidiary, the parent is hesitant to direct additional funds to the subsidiary, arguing that it is best to limit losses and exposure and it is imprudent for the parent to inject additional capital at this time. Given this experience, it is often considered appropriate for an examiner to comment on a subsidiary's extended leveraged position, indicating to management that the

company has little, if any, capital "cushion" with which to absorb any asset "shrinkage" or loss. The examiner may then conclude and possibly recommend that additional capital be provided for the credit-extending nonbank subsidiary so that its leverage may be reduced and its capital structure altered to reflect more closely an independent organization in the same or similar industry.

Funding should be reviewed to determine that the subsidiary (or the parent) is not mismatching maturities by borrowing short-term funds and applying them to long-term assets that are not readily convertible into cash. A mismatch of maturities can lead to serious liquidity problems.

A primary concern of the holding company examiner is to determine whether the nonbank subsidiary has the capacity to service its debt in an orderly manner. Does the credit-extending nonbank subsidiary have sufficient liquidity and how much will it have to rely on the parent company for funds to retire debt to unaffiliated parties? Factors to be considered include:

1. The subsidiary's asset quality and its ability to convert assets into cash at or near current carrying value. Consider the maturities of borrowings and whether they align with the scheduled assets that will be converted to cash.
2. The subsidiary's and the parent's back-up bank lines of credit available in the event commercial paper cannot be refinanced.
3. The parent company's ability to require its bank or other nonbank subsidiaries to upstream extra dividends to support the illiquid position of one or more of its nonbank subsidiaries.

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The purpose of a credit-extending nonbank subsidiary's reserve for bad debts is to provide for known and potential losses in its assets. Although there is no specific formula for measuring the adequacy of a reserve for bad debts, prudence dictates that the reserve account should be maintained at a "reasonable" level. What is reasonable depends on the quality of the subsidiary's assets, its collection history and other facts. However, from a supervisory perspective, the reserve for bad debts should at least provide total coverage for all assets classified "loss" and still be sufficient to absorb future, unidentified, "normal" losses, that are estimated based on the "doubtful" and "substandard" classifications and the company's historic experience. Valuation reserves for a going concern are not considered adequate unless they can absorb 100 percent of identified losses and still have a balance sufficient to absorb future losses from continued operations.

Examiners should recommend the maintenance of valuation reserves sufficient to offset classified losses and may recommend (as opposed to require) that management charge-off the losses to the reserve account. The charge-off of classified losses is considered appropriate in order to assure that financial statements accurately reflect the company's financial condition. The Federal Reserve System has the responsibility to monitor the bank holding company's nonbank subsidiary statements for accuracy and completeness. Failure by management to reflect accurately the financial condition of the subsidiary and/or parent company could result in a formal corrective action to require charge-offs or other adjustments to financial statements.

For additional information, see Manual section 4030.1, "Classifications."

The noncredit-extending nonbank subsidiaries provide services or financial products other than extensions of credit. Some of these companies are insurance agencies, credit life and credit accident and health insurance underwriting companies, electronic data processing centers, management consulting firms and advisory companies.

The operations of some insurance agencies are conducted on the premises of the bank subsidiary(ies) by personnel who often serve as officers or employees of the bank. These companies usually incur little or no liabilities and require only nominal capitalization because risk is limited. However, their commission income is often substantial and a steady source of funds for the parent company. Nevertheless, insurance “underwriters” typically have strong capital bases, good liquidity and profitable operations. Furthermore, their operating risks are generally stable and predictable.

Electronic data processing centers are often established under section 4(c)(8) of the Act, which permits them to sell their services to affiliated and unaffiliated customers. Section 4050.0 of this Manual cites examples of how an EDP servicer can have an unfavorable impact on the parent company or its affiliates. Management consulting firms and advisory companies usually require little capitalization and no funding and generate favorable earnings. Of the noncredit-extending subsidiaries, insurance underwriters and EDP servicers are generally the only companies requiring capital and funding in significant amounts.

However, all subsidiaries are subject to some level of risk, which could impact on the BHC. In the case of insurance underwriters, insurance benefits paid could exceed actuarial estimates. Such a situation, however rare, could necessitate financial support from the parent company. EDP servicers could, as a result of excessive computer down-time or equipment obsolescence, impact on consolidated earnings or require additional capital contributions. In addition, contingent liabilities, resulting from legal actions or failure to perform, could be a large multiple of a subsidiary’s capital and may affect the parent.

4040.0.1 EARNINGS

In analyzing these subsidiaries, the examiner should consider the following:

1. Are any noncredit-extending subsidiaries operating at a loss or incurring low levels of earnings? If so, what is the cause and does it have a material impact on consolidated earnings?

2. Does the loss result in the subsidiary’s reliance on the parent company or bank subsidiary(ies) for financial support? If so, in what form is the support provided?

3. If a loss has been incurred, has management initiated corrective measures? If not, why not?

4. Are the fees charged by the parent for services rendered limited to their *fair market value*? The answer to this question will almost always depend on information supplied by management. Management should be aware of the fair market rates charged by their competitors for similar services rendered.

5. Are the rates charged affiliates commensurate with the services provided and similar to rates charged nonaffiliated customers?

4040.0.2 RISK EXPOSURE

In noncredit-extending subsidiaries, risk exposure, of any meaningful magnitude, is often related to possible losses arising from legal actions for failure to perform services as contracted. The examiner should determine that the subsidiaries are being operated effectively by experienced and competent personnel under the direction of satisfactory management. The examiner should further determine that parent company management exercises appropriate controls over the activities of the subsidiary. Because of potential liability, the examiner should ascertain whether the subsidiaries have adequate insurance coverage (i.e., errors and omissions, public liability, etc.). The examiner should be alert to any contingent liabilities that would have a significant impact of the parent company. For example, the parent company might guarantee the payment of debt or leases for the subsidiary.

The internal services subsidiaries generally derive their business only from the parent company and its affiliates. Examples of such companies include forms printing firms, owners and operators of banking premises, and EDP servicing companies. Banking premises subsidiaries are established to hold or operate properties used wholly or substantially by the parent's subsidiary for its banking business. Generally, their operations do not impact unfavorably on the parent company. However, in instances where the banking premises are not wholly occupied by a banking subsidiary, the examiner should ascertain that the excess space is fully leased/rented. A high vacancy level could result in unprofitable operations or result in an abnormal rental charge to the banking subsidiary in order to operate the subsidiary on a profitable, or break even, basis.

EDP service centers provide bookkeeping or data processing services for the internal operations of the holding company and its subsidiaries, and store and process other banking, financial or related economic data. Generally, these

service centers do not have a material effect on consolidated earnings performance as they provide essential services at costs comparable or below their independent counterparts. They usually operate on a break-even basis or at a nominal profit. However, there are some subsidiaries, including EDP servicers, which also provide services indirectly to unaffiliated concerns. EDP servicers operating under section 4(c)(1)(C) of the Act, may provide services to customers of its bank affiliates, provided that the service contract is between the bank and the customer. EDP servicers that operate as independent subsidiaries under section 4(c)(8) of the Act are not similarly restricted and are not considered "not for profit" organizations.

A financial analysis of a "not for profit" service subsidiary should concentrate on the organization's ability to control its expenses and its ability to provide its services to its affiliates at fair market value. Failure to control expenses may result in excessive charges to affiliates to the detriment of the affiliate.

For purposes of an analysis of earnings, analysts of bank holding companies have placed considerable weight on consolidated BHC financial data. Consolidated data, however, can be very misleading since bank assets and revenues are large in relation to their profit margins. On the other hand, the volume of nonbank assets is generally not nearly as large, but profit margins (or losses) tend to be much more substantial. The organizational structure of a holding company is of prime importance and must first be taken into consideration before attempting to analyze consolidated earnings. As an example, in the case of nonoperating shell bank holding companies with no nonbank subsidiaries, the earnings of the bank subsidiary should be nearly identical with consolidated earnings for the organization. Therefore, in these instances, the views and ratings of the applicable bank regulatory agency would normally be accepted and would apply to consolidated earnings of the BHC. This treatment would not apply to one-bank and multi-bank holding companies with substantial credit-extending nonbank subsidiaries. These holding companies require an in-depth analysis of earnings because of the adverse impact that a poorly operated subsidiary can have upon the consolidated earnings of the BHC.

In order to properly analyze consolidated earnings, it is best to review and study a consolidated statement of income and expense for the purpose of determining each entity's contribution to earnings. It is important to recognize that there need be no direct correlation between the asset size of a subsidiary and its relative contribution to total consolidated earnings. For example, a subsidiary accounting for a minute portion of consolidated assets could substantially negate satisfactory earnings of its larger asset base affiliates because of poor operations and sizeable losses.

When evaluating consolidated earnings, it is important to review the component parts of earnings for prior interim or fiscal periods for comparative purposes in order to determine trends. Considerable attention is to be focused on the various income and expense categories. The net interest income (difference between interest income and interest expense) of a company is highly revealing as it will give an indication of management's ability to borrow at attractive rates and employ those funds with maximum profitable results.

Items having a significant impact on earnings include the noncash charge, "provisions for loan

losses" and the volume of nonaccrual and renegotiated or restructured credits. A large provision for loan losses is made necessary by poor quality assets which result in large charge-offs to valuation reserves. In order to replenish the reserve for loan losses to adequate levels to provide ample coverage against known and potential losses, large amounts of revenues must be "set aside." Nonperforming and renegotiated credits either provide no income or provide a reduced rate of income to the extent that the assets are no longer profitable relative to the cost of funds and the cost of doing business. In situations where earnings are below average or unsatisfactory, a comment concerning the amount of provision for loan losses and volume of nonperforming loans is warranted in the financial analysis.

Other items of significance include taxes, particularly where tax credits are indicative of loss operations, and extraordinary or nonrecurring items. Extraordinary gains or losses are not the result of the normal operations of a company and should be analyzed independently from operating earnings. Generally, extraordinary items result from the sale of current or fixed assets. When significant amounts are involved, examiners should determine the underlying reasons behind such transactions.

After an analysis has been made of the pertinent components of earnings, analyze the "bottom line" or net income of the consolidated company. Generally, analysts relate net income to several benchmarks in order to evaluate performance. The ratios of earnings as a percentage of average equity capital or average assets are most widely used. Conclude the analysis with a comparison of a company's ratios in relation to its peer group.

Comparatively low earnings relative to its peer group may be a reflection of problems and weaknesses such as lax or speculative credit practices (resulting in nonearning assets or loan losses), high interest costs resulting from excessive debt, or rapid expansion into competitive industries subject to wide variations in income potential.

Earnings on a consolidated basis are the best measure of performance. Moreover, while the earnings of individual subsidiaries must not be ignored, the ability of holding company management to control the level of reported earnings in any one subsidiary reaffirms the practi-

cality of using the consolidated approach to analyze holding company profitability.

Essentially, the following points summarize areas which should be considered when analyzing consolidated earnings:

1. The return on consolidated assets and equity capital, as well as historical trends and peer group comparisons.
2. The ability of earnings to provide for capital growth, especially when taking into consideration recent and planned asset and deposit growth.
3. The "quality" of earnings is affected by

the sufficiency of the provision to loan loss reserves and the asset quality of the organization. A high level of earnings that did not include sufficient provisions to the loan loss reserve during a period of high charge-offs may result in reductions in the reserve balance and thereby call to question the merits of high earnings in the face of declining reserve balances.

4. The ability of management to prepare realistic earnings projections in light of the risk structure and quality of assets.

The evaluation of asset quality based on classifications of “substandard, doubtful and loss,” is one of the most important elements to be taken into consideration when performing a financial analysis of a holding company because of the severe impact that poor quality assets can have on the overall condition of the organization. Procedures to measure asset quality of banks involve the use of the relationship of weighted classified assets to Tier 1 capital funds and total classifications to total capital funds. Accordingly, consolidated asset quality could be based on the relationship of aggregate weighted classified assets of the parent company, bank subsidiary(ies) and nonbank subsidiary(ies), to Tier 1 capital.

However, a problem encountered when viewing asset quality on a consolidated basis is the fact that in multi-bank holding companies there is usually a large timing difference between the dates of examinations of the banking subsidiaries. Therefore, the aggregating of classified bank assets from reports prepared at different times, reduces the currentness and validity of conclusions drawn. This problem can only be eliminated by using common examination and inspection dates which are not generally available.

Despite the shortcoming of using classification information from different dates, an examiner may determine that there is a sufficient measure of validity in using the data and may present an analysis based on consolidated weighted classifications. For example, if there are a small number of bank subsidiaries and if the examination dates are near a common point in time, timing differences may be inconsequential. Or, if a review of several years of a bank's

examinations reveals a relatively constant or stable level of classifications, then the timing of the most recent examination would not invalidate use of the analytical tool. As such, the technique may be employed when circumstances permit.

Other factors to be considered in determining asset quality include the levels of nonaccrual and renegotiated loans, other real estate owned and past due loans. While these assets may not be subject to classification, they usually represent former or emerging problem loans. Moreover, in the aggregate, they may represent a significant proportion of the asset portfolio. If such is the case, they should be taken into consideration when the examiner determines his overall rating of asset quality.

It is difficult to rely on the adequacy of consolidated reserves because they are “fractured” and protect portfolios in different organizations and may not be interchangeable or transferable. The reserve of each entity in the corporate structure must be reviewed or analyzed individually. For example, if consolidated reserves appear inadequate, there is no consolidated reserve account per se that could be increased to adequate proportions. Consequently, the inadequacy would have to be identified at the parent or subsidiary level. Conversely, if consolidated reserves appear to adequately cover the aggregate of all “loss” and a certain portion of “doubtful,” it does not insure that all subsidiaries have adequate reserves. Nevertheless, despite the shortcomings of using consolidated reserves, the analyst should not hesitate to calculate and present a measure of the relationship of consolidated reserves to consolidated loans.

Consolidated Capital (Examiners' Guidelines for Assessing the Capital Adequacy of BHCs) Section 4060.3

WHAT'S NEW IN THIS REVISED SECTION

Effective January 2011, this section has been revised to

1. delete the discussions about excluding certain consolidated bank holding company (BHC)-sponsored asset-backed commercial paper (ABCP) programs from the computation of risk-weighted assets; also delete a related exclusion from tier 1 capital—a minority interest in a consolidated ABCP program that is not included in risk-weighted assets. This change was the result of a January 2010, risk-based capital rule change (effective date, March 29, 2010). (See 12 C.F.R. 225, appendix A and 75 Fed. Reg. 4636, January 28, 2010.)
2. include, effective January 29, 2009, amendment to the risk-based capital rule that permits BHCs to reduce the amount of goodwill that must be deducted from tier 1 capital by the amount of any deferred tax liability associated with that goodwill. (See 73 Fed. Reg. 79602, December 30, 2008.)
3. provide information on the implementation of a limit, on the aggregate amount of a BHC's restricted core capital elements, which includes trust preferred securities, of 25 percent of total core capital elements (net of goodwill) that can be included in the tier 1 capital of a BHC. This limit is effective on March 31, 2011.
4. discuss the inclusion, without limit, in tier 1 capital of senior perpetual preferred stock issued to the U.S. Department of the Treasury under the Trouble Asset Relief Program (TARP), established by the Emergency Economic Stabilization Act of 2008 (EESA), which will be considered qualifying noncumulative perpetual preferred stock, including its related surplus.
5. clarify the assignment of a 20 percent risk-weight to the guaranteed portion of loss on assets subject to a loss-sharing agreement between the FDIC and acquirers of assets from failed institutions—considered conditional guarantees for risk-based capital purposes. (See SR-10-4 and its attachment)
6. include in tier 1 capital, of subordinated debentures issued to the Treasury under the TARP—TARP Subordinated Securities (1) by a BHC that has made a valid election to be taxed under Subchapter S of the Internal Revenue Code (S-Corp BHC) or (2) by a

BHC organized in mutual form (Mutual BHC). The inclusion of TARP subordinated securities in tier 1 capital counts toward the limit on the amount of restricted core capital elements that can be included in tier 1 capital.

4060.3.1 INTRODUCTION TO EXAMINER GUIDELINES FOR RISK-BASED CAPITAL

To assist in assessing the capital adequacy of bank holding companies, the Board has established two measures of capital adequacy: the risk-based capital measure and the tier 1 leverage measure. Throughout this section, references to a “section” that are followed by outline numbers and letters (for example, section II.B.) mean the risk-based capital guidelines for bank holding companies (12 C.F.R. 225, appendix A). The tier 1 leverage measure is discussed in section 4060.4.

4060.3.2 OVERVIEW OF RISK-BASED CAPITAL GUIDELINES

The Board's risk-based capital guidelines (the guidelines) focus principally on the credit risks associated with the nature of banking organizations' on- and off-balance-sheet assets and on the type and quality of their capital. The information provided in this section should be used in conjunction with the risk-based capital guidelines in verifying the bank holding company's risk-based capital. Examiners must refer to Regulation Y (12 C.F.R. 225, appendix A) for a complete description of the risk-based capital adequacy guidelines for bank holding companies.

The guidelines do not incorporate other factors that may also affect the financial condition of banking organizations. These factors include overall interest-rate risk exposure; liquidity, funding, and market risks; the quality and level of earnings; the effectiveness of loan and investment policies on operational results and the quality of assets; and management's ability to monitor and control financial and operating risks.

The major objectives of the guidelines are to make regulatory capital requirements more sensitive to differences in credit-risk profiles among banking organizations; to factor off-balance-sheet exposures into the assessment of

capital adequacy; to minimize disincentives to holding liquid, low-risk assets; and to achieve greater consistency in the evaluation of the capital adequacy of major banking organizations worldwide.

The guidelines set forth *minimum* supervisory capital standards for banking organizations. Therefore, banking organizations are expected to operate with capital levels above the minimum ratios. This requirement is particularly true for banking organizations that are undertaking significant expansion or that are exposed to high or unusual levels of risk.

The risk-based guidelines apply on a consolidated basis to any bank holding company with consolidated assets of \$500 million or more. The risk-based guidelines also apply on a consolidated basis to any bank holding company with consolidated assets of less than \$500 million if the holding company (1) is engaged in significant nonbanking activities either directly or through a nonbank subsidiary; (2) conducts significant off-balance-sheet activities (including securitization and asset management or administration) either directly or through a nonbank subsidiary; or (3) has a material amount of debt or equity securities outstanding (other than trust preferred securities) that are SEC-registered. BHCs with consolidated assets of less than \$500 million would generally be exempt from the calculation and analysis of risk-based capital ratios on a consolidated holding company basis, subject to certain terms and restrictions. The Federal Reserve may apply the risk-based guidelines at its discretion to any bank holding company, regardless of asset size, if such action is warranted for supervisory purposes.

By year-end 1992 and thereafter, the risk-based capital guidelines required all bank holding companies to meet a standard—a minimum ratio of total capital to risk-weighted assets of 8 percent and a minimum ratio of tier 1 capital to risk-weighted assets of 4 percent.

The risk-based capital guidelines were intended to better reflect the differences in credit-risk profiles among banking organizations and to explicitly factor off-balance sheet exposures into the assessment of capital adequacy by weighting on- and off-balance sheet items by perceived degrees of credit risk. The basic elements of the framework include definitions of capital that include core elements and supplementary elements, the assignment of on- and off-balance-sheet items to broad categories of credit risk, and the methodology for computing risk-based

capital ratios for banking organizations on an interim and final basis.

The Federal Reserve may determine that the regulatory capital treatment for a banking organization's exposure or other relationship to an entity not consolidated on the banking organization's balance sheet is not commensurate with the actual risk relationship of the banking organization to the entity. In making this determination, the Federal Reserve may require the banking organization to treat the entity as if it were consolidated onto the balance sheet of the banking organization for risk-based capital purposes and calculate the appropriate risk-based capital ratios accordingly, all as specified by the Federal Reserve.

Market-Risk Rule. Examiners should be aware that when certain organizations that engage in trading activities calculate their risk-based capital ratio under appendix A, they must also refer to appendix E of Regulation Y, which incorporates capital charges for certain market risks into the risk-based capital ratio. Examiners should also refer to the *Trading and Capital-Markets Activities Manual* for more-detailed supervisory guidance. When calculating their risk-based capital ratio under appendix A, such organizations are required to refer to appendix E for supplemental rules to determine qualifying and excess capital, calculate risk-weighted assets, calculate market-risk-equivalent assets, and calculate risk-based capital ratios adjusted for market risk.

BHCs are responsible for identifying their trading and other market risks and for implementing a sound risk-management program commensurate with those risks. Such programs should include appropriate quantitative metrics as well as ongoing qualitative analysis performed by competent, independent risk-management staff. At a minimum, BHCs should reassess annually and adjust their market-risk management programs, taking into account changing firm strategies, market developments, organizational incentive structures, and evolving risk-management techniques. In August 1996, the Federal Reserve amended its risk-based capital framework to incorporate a measure for market risk for BHCs. The market-risk rule is found in Regulation Y (12 C.F.R. 225), appendix E.¹ Under the market-risk rule, certain BHCs with significant expo-

1. On February 6, 2006 (effective February 22, 2006), the Board approved a revision to its market-risk rule. The amendment lessened and aligned the capital requirement of BHCs (that have adopted the market-risk rule) to the risk involved with certain cash collateral that is posted in connection with securities-borrowing transactions. It also broadened the scope of counterparties for which the favorable capital treatment

sure to market risk must measure that risk using their internal value-at-risk (VaR) measurement model and, subject to parameters in the market-risk rule, hold sufficient levels of capital to cover the exposure. The market-risk rule applies to any BHC (on a worldwide consolidated basis) whose trading activity (the gross sum of its trading assets and liabilities) equals (1) 10 percent or more of its total assets or (2) \$1 billion or more. On a case-by-case basis, the Federal Reserve may require a BHC that does not meet these criteria to comply with the market-risk rule if deemed necessary for safe and sound banking practices. The Federal Reserve may also exclude a BHC from appendix E that otherwise meets the criteria as a consequence of accounting, operational, or similar considerations, if such exclusion is deemed to be consistent with safe and sound banking practices. The market-risk rule supplements the risk-based capital rules for credit risk; a BHC applying the market-risk rule remains subject to the requirements of the credit-risk rules but must adjust its risk-based capital ratio to reflect market risk.

In January 2009, the Board issued SR-09-1, "Application of the Market Risk Rule in Bank Holding Companies and State Member Banks," which reiterated some of the market-risk rule's core requirements, provided guidance on certain technical aspects of the rule, and clarified several issues. SR-09-1 discusses (1) the core requirements of the market-risk rule, (2) the market-risk rule capital computational requirements, and (3) the communication and Federal Reserve requirements in order for a BHC to use its VaR models. A BHC that is applying the market-risk rule must hold capital to support its exposure to two types of risk: (1) general market risk arising from broad fluctuations in interest rates, equity prices, foreign exchange rates, and commodity prices, including risk associated with all derivative positions and (2) specific risk arising from changes in the market value of debt and equity positions in the trading account due to factors other than broad market movements, including the credit risk of an instrument's issuer. A BHC's covered positions include all trading-account positions as well as all foreign exchange and commodity positions, whether or not they are in the trading account. BHCs that are subject to the market-risk capital rules are precluded from applying those rules to positions held in the BHC's trading portfolio that act, in form or in substance, as liquidity facilities supporting asset-backed commercial paper (ABCP).

(See the definition of *covered positions* in appendix E, section 2(a).) Any facility held in the trading portfolio whose primary function, in form or in substance, is to provide liquidity to ABCP—even if the facility does not qualify as an eligible ABCP liquidity facility under the rule—will be subject to the BHC's risk-based capital requirements. Specifically, organizations will be required to convert the notional amount of all trading portfolio positions that provide liquidity to ABCP to credit-equivalent amounts by applying the appropriate credit-conversion factors. For example, the full notional amount of all eligible ABCP liquidity facilities with an original maturity of one year or less will be subject to a 10 percent conversion factor, as described previously, regardless of whether the facility is carried in the trading account or non-trading account.

4060.3.2.1 Definition of Capital

For the purposes of the risk-based capital guidelines, a banking organization's qualifying total capital consists of two types of capital components: "core capital elements" (tier 1 capital elements) and "supplementary capital elements" (tier 2 capital elements). To qualify as an element of tier 1 or tier 2 capital, an instrument must be fully paid up and effectively unsecured. Accordingly, if a banking organization has purchased, or has directly or indirectly funded the purchase of, its own capital instrument, that instrument generally is disqualified from inclusion in regulatory capital. A qualifying tier 1 or tier 2 capital instrument must be subordinated to all senior indebtedness of the organization. If issued by a bank, it also must be subordinated to claims of depositors. In addition, the instrument must not contain or be covered by any covenants, terms, or restrictions that are inconsistent with safe and sound banking practices.

4060.3.2.1.1 Tier 1 Capital

Tier 1 capital generally is defined as the sum of core capital elements less any amounts of goodwill, other intangible assets, interest-only strips receivable, deferred tax assets, nonfinancial equity investments, and other items that are required to be deducted by section II.B. Tier 1 capital must represent at least 50 percent of qualifying total capital. The core capital elements (tier 1 capital elements) qualifying for inclusion in the tier 1

component of a banking organization's qualifying total capital are—

1. qualifying common stockholders' equity;
2. qualifying noncumulative perpetual preferred stock (including related surplus) and senior perpetual preferred stock issued to the U.S. Department of the Treasury (Treasury) under the Troubled Asset Relief Program (TARP), under the Emergency Economic Stabilization Act of 2008 (EESA), which shall be considered qualifying noncumulative perpetual preferred stock, including related surplus;
3. minority interest related to qualifying common or noncumulative perpetual preferred stock directly issued by a consolidated U.S. depository institution or foreign bank subsidiary (class A minority interest);
4. restricted core capital elements. Restricted core capital elements are defined to include—
 - a. qualifying cumulative perpetual preferred stock (including related surplus);
 - b. minority interest related to qualifying cumulative perpetual preferred stock directly issued by a consolidated U.S. depository institution or foreign bank subsidiary (class B minority interest);
 - c. minority interest related to qualifying common stockholders' equity or perpetual preferred stock issued by a consolidated subsidiary that is neither a U.S. depository institution nor a foreign bank (class C minority interest); and
 - d. qualifying trust preferred securities.
5. subordinated debentures issued to the Treasury under the TARP (TARP Subordinated Securities), and under the EESA, by a bank holding company that has made a valid election to be taxed under Subchapter S of Chapter 1 of the U.S. Internal Revenue Code (S-Corp BHC) or by a bank holding company organized in mutual form (Mutual BHC).

4060.3.2.1.1.1 Limits in Effect Until March 31, 2011

Until March 31, 2011,^{1a} the aggregate amount of qualifying cumulative perpetual preferred

^{1a}. The Board decided to delay implementation of this limit until March 31, 2011, citing prevailing market conditions. It was noted that BHCs should focus their efforts on increasing their overall capital levels. (See 74 *Fed. Reg.* 12076, March 23, 2009.)

stock (including related surplus) and qualifying trust preferred securities that a banking organization may include in tier 1 capital is limited to 25 percent of the sum (including cumulative perpetual preferred stock and trust preferred securities) of the following core capital elements: qualifying common stockholders' equity, qualifying noncumulative and cumulative perpetual preferred stock (including related surplus), qualifying minority interest in the equity accounts of consolidated subsidiaries, and qualifying trust preferred securities. Amounts of qualifying cumulative perpetual preferred stock (including related surplus) and qualifying trust preferred securities in excess of this limit may be included in tier 2 capital.

Until March 31, 2011, internationally active banking organizations are generally expected to limit the amount of qualifying cumulative perpetual preferred stock (including related surplus) and qualifying trust preferred securities included in tier 1 capital to 15 percent of the sum of core capital elements set forth in the preceding paragraph (section II.A.1.b.ii.2.).

4060.3.2.1.1.2 Limits That Become Effective March 31, 2011

Effective March 31, 2011, the aggregate amount of restricted core capital elements that may be included in the tier 1 capital of a banking organization must not exceed 25 percent of the sum of all core capital elements, including restricted core capital elements, net of goodwill less any associated deferred tax liability. Stated differently, the aggregate amount of restricted core capital elements is limited to one-third of the sum of core capital elements, excluding restricted core capital elements, net of goodwill less any associated deferred tax liability. Notwithstanding the foregoing, the full amount of TARP Subordinated Securities issued by an S-Corp BHC or Mutual BHC may be included in its tier 1 capital, provided that the banking organization must include the TARP Subordinated Securities in restricted core capital elements for the purposes of determining the aggregate amount of other restricted core capital elements that may be included in tier 1 capital in accordance with this section.

In addition, the aggregate amount of restricted core capital elements (other than qualifying mandatory convertible preferred securities^{1b})

^{1b}. Qualifying mandatory convertible preferred securities generally consist of the joint issuance by a bank holding company to investors of trust preferred securities and a for-

that may be included in the tier 1 capital of an internationally active banking organization² must not exceed 15 percent of the sum of all core capital elements, including restricted core capital elements, net of goodwill less any associated deferred tax liability.

Amounts of restricted core capital elements in excess of this limit generally may be included in tier 2 capital. The excess amounts of restricted core capital elements that are in the form of class C minority interest and qualifying trust preferred securities are subject to further limitation within tier 2 capital in accordance with section II.A.2.d.iv. Specifically, the aggregate amount of term subordinated debt (excluding mandatory convertible debt) and limited-life preferred stock as well as, beginning March 31, 2011, qualifying trust preferred securities and class C minority interest in excess of the 15 and 25 percent tier 1 capital limits that may be included in tier 2 capital is limited to 50 percent of tier 1 capital, net of goodwill and other intangible assets required to be deducted. A banking organization may attribute excess amounts of restricted core capital elements first to any qualifying cumulative perpetual preferred stock or to class B minority interest, and second to qualifying trust preferred securities or to class C minority interest, which are subject to the tier 2 sublimit. Amounts in excess of the tier 2 sublimit are taken into account in the overall assessment of a BHC's funding and financial condition.

Prior to March 31, 2011, a banking organization with restricted core capital elements in

ward purchase contract, which the investors fully collateralize with the securities, that obligates the investors to purchase a fixed amount of the bank holding company's common stock, generally in three years. Typically, prior to exercise of the purchase contract in three years, the trust preferred securities are remarketed by the initial investors to new investors, and the cash proceeds are used to satisfy the investors' obligation to buy the BHC's common stock. The common stock replaces the initial trust preferred securities as a component of the BHC's tier 1 capital, and the remarketed trust preferred securities are excluded from the BHC's regulatory capital. A bank holding company wishing to issue mandatory convertible preferred securities and include them in tier 1 capital must consult with the Federal Reserve prior to issuance to ensure that the securities' terms are consistent with tier 1 capital treatment. See section 4060.3.9.1 for the Board's January 23, 2006, legal interpretation regarding the appropriate risk-based capital treatment for a BHC's issuance of trust preferred securities that are mandatorily convertible into noncumulative perpetual preferred securities.

2. For this purpose, an internationally active banking organization is a banking organization that (1) as of its most recent year-end FR Y-9C reports total consolidated assets equal to \$250 billion or more or (2) on a consolidated basis, reports total on-balance-sheet foreign exposure of \$10 billion or more on its filings of the most recent year-end FFIEC 009 Country Exposure Report.

amounts that cause it to exceed the 25 and 15 percent tier 1 capital limits must consult with the Federal Reserve on a plan for ensuring that the banking organization is not unduly relying on these elements in its capital base and, where appropriate, for reducing such reliance to ensure that the organization complies with these limits as of March 31, 2011.

4060.3.2.1.1.3 Qualifying Common Stockholders' Equity

Qualifying common stockholders' equity is limited to common stock; related surplus; and retained earnings, including capital reserves and adjustments for the cumulative effect of foreign-currency translation, net of any treasury stock, less net unrealized holding losses on available-for-sale equity securities with readily determinable fair values. For this purpose, net unrealized holding gains on such equity securities and net unrealized holding gains (losses) on available-for-sale debt securities are not included in qualifying common stockholders' equity.

There are restrictions on the terms and features of qualifying stockholders' equity. A capital instrument that has a stated maturity date or that has a preference with regard to liquidation or the payment of dividends is not deemed to be a component of qualifying common stockholders' equity, regardless of whether or not it is called common equity. Terms or features that grant other preferences also may call into question whether the capital instrument would be deemed to be qualifying common stockholders' equity. Features that require, or provide significant incentives for, the issuer to redeem the instrument for cash or cash equivalents will render the instrument ineligible as a component of qualifying common stockholders' equity.

Although section II.A.1. allows for the inclusion of elements other than common stockholders' equity within tier 1 capital, voting common stockholders' equity, which is the most desirable capital element from a supervisory standpoint, generally should be the dominant element within tier 1 capital. Thus, banking organizations should avoid overreliance on preferred stock and nonvoting elements within tier 1 capital. Such nonvoting elements can include portions of common stockholders' equity where, for example, a banking organization has a class of nonvoting common equity, or a class of voting common equity that has substantially fewer

voting rights per share than another class of voting common equity. Where a banking organization relies excessively on nonvoting elements within tier 1 capital, the Federal Reserve generally will require the banking organization to allocate a portion of the nonvoting elements to tier 2 capital.

4060.3.2.1.1.4 Qualifying Perpetual Preferred Stock

Perpetual preferred stock qualifying for inclusion in tier 1 capital has no maturity date and cannot be redeemed at the option of the holder. Perpetual preferred stock will qualify for inclusion in tier 1 capital only if it can absorb losses while the issuer operates as a going concern.

There are restrictions on the terms and features of perpetual preferred stock. Perpetual preferred stock included in tier 1 capital may not have any provisions restricting the banking organization's ability or legal right to defer or waive dividends, other than provisions requiring prior or concurrent deferral or waiver of payments on more-junior instruments. The Federal Reserve generally expects instruments to contain such a provision, which is consistent with the notion that the most junior capital elements should absorb losses first. Dividend deferrals or waivers for preferred stock, which the Federal Reserve expects will occur either voluntarily or at its direction when an organization is in a weakened condition, must not be subject to arrangements that would diminish the ability of the deferral to shore up the banking organization's resources. Any perpetual preferred stock with a feature permitting redemption at the option of the issuer may qualify as tier 1 capital only if the redemption is subject to prior approval of the Federal Reserve. Features that require, or create significant incentives for, the issuer to redeem the instrument for cash or cash equivalents will render the instrument ineligible for inclusion in tier 1 capital. For example, perpetual preferred stock that has a credit-sensitive dividend feature—that is, a dividend rate that is reset periodically based, in whole or in part, on the banking organization's current credit standing—generally does not qualify for inclusion in tier 1 capital.³ Simi-

larly, perpetual preferred stock that has a dividend-rate step-up or a market-value conversion feature—that is, a feature whereby the holder must or can convert the preferred stock into common stock at the market price prevailing at the time of conversion—generally does not qualify for inclusion in tier 1 capital.⁴ Perpetual preferred stock that does not qualify for inclusion in tier 1 capital generally will qualify for inclusion in tier 2 capital.

Perpetual preferred stock included in tier 1 capital may provide for dividend waivers on either a cumulative or noncumulative basis. Perpetual preferred stock that is noncumulative generally may not permit the accumulation or payment of unpaid dividends in any form, including in the form of common stock. Perpetual preferred stock that provides for the accumulation or future payment of unpaid dividends is deemed to be cumulative, regardless of whether or not it is called noncumulative.

The Board has noted that it generally is permissible (1) for perpetual preferred stock to provide voting rights to investors upon the nonpayment of dividends or (2) for junior subordinated debt and trust preferred securities to provide voting rights to investors upon the deferral of interest and dividends, respectively. However, these clauses conferring voting rights may contain only customary provisions, such as the ability to elect one or two directors to the board of the BHC issuer, and may not be so adverse as to create a substantial disincentive for the banking organization to defer interest and dividends when necessary or prudent.

4060.3.2.1.1.5 Qualifying Minority Interest in the Equity Accounts of Consolidated Subsidiaries

Minority interest in the common and preferred stockholders' equity accounts of a consolidated subsidiary (minority interest) represents stockholders' equity associated with common or preferred equity instruments issued by a banking organization's consolidated subsidiary that are held by investors other than the banking organization. Minority interest is included in

rates), however, generally qualifies for inclusion in tier 1 capital provided all other requirements are met.

4. Notwithstanding this provision, senior perpetual preferred stock issued to the Treasury under the TARP, under the EESA, may be included in tier 1 capital. Traditional convertible perpetual preferred stock, which the holder must or can convert into a fixed number of common shares at a preset price, generally qualifies for inclusion in tier 1 capital provided all other requirements are met.

3. Traditional floating-rate or adjustable-rate perpetual preferred stock (that is, perpetual preferred stock in which the dividend rate is not affected by the issuer's credit standing or financial condition but is adjusted periodically in relation to an independent index based solely on general market interest

tier 1 capital because, as a general rule, it represents equity that is freely available to absorb losses in the issuing subsidiary. Nonetheless, minority interest typically is not available to absorb losses in the banking organization as a whole, a feature that is a particular concern when the minority interest is issued by a subsidiary that is neither a U.S. depository institution nor a foreign bank. For this reason, the capital guidelines distinguish among three types of qualifying minority interest. Class A minority interest is minority interest related to qualifying common and noncumulative perpetual preferred stock issued directly (that is, not through a subsidiary) by a consolidated U.S. depository institution⁵ or foreign bank⁶ subsidiary of a banking organization. Class A minority interest is not subject to a formal limitation within tier 1 capital. Class B minority interest is minority interest related to qualifying cumulative perpetual preferred stock issued directly by a consolidated U.S. depository institution or foreign bank subsidiary of a banking organization. Class B minority interest is a restricted core capital element subject to the limitations set forth in section II.A.1.b.i. of the capital guidelines (12 C.F.R. 225, appendix A), but it is not subject to a tier 2 sublimit. Class C minority interest is minority interest related to qualifying common or perpetual preferred stock issued by a banking organization's consolidated subsidiary that is neither a U.S. depository institution nor a foreign bank. Class C minority interest is eligible for inclusion in tier 1 capital as a restricted core capital element and is subject to the limitations set forth in sections II.A.1.b.i. and II.A.2.d.iv.

4060.3.2.1.1.6 Minority Interests in Small Business Investment Companies

Minority interests in small business investment companies (SBICs), in investment funds that hold nonfinancial equity investments, and in subsidiaries engaged in nonfinancial activities

are not included in the banking organization's tier 1 or total capital base if the banking organization's interest in the company or fund is held under one of the legal authorities listed in section II.B.5.b.

4060.3.2.1.1.7 Minority Interests in Consolidated Asset-Backed Commercial Paper Programs

Minority interests in consolidated asset-backed commercial paper (ABCP) programs that are sponsored by a banking organization are included in the organization's tier 1 or total capital.

4060.3.2.1.1.8 Qualifying Trust Preferred Securities

Trust preferred securities are undated cumulative preferred securities issued out of a special-purpose entity (SPE), usually in the form of a trust, in which a BHC owns all of the common securities. A key advantage of trust preferred securities to BHCs is that for tax purposes the dividends paid on trust preferred securities, unlike those paid on directly issued preferred stock, are a tax-deductible interest expense. The Internal Revenue Service ignores the trust and focuses on the interest payments on the underlying subordinated note.

In 2000, the first pooled issuance of trust preferred securities came to market. Pooled issuances generally constitute the issuance of trust preferred securities by a number of BHCs to a pooling entity that issues to the market asset-backed securities representing interests in the BHCs' pooled trust preferred securities. Such pooling arrangements, which have become increasingly popular and typically involve 30 or more separate BHC issuers, have made the issuance of trust preferred securities possible for even very small BHCs, most of which had not previously enjoyed capital-market access for raising tier 1 capital.

BHCs in deteriorating financial condition have deferred dividends on trust preferred securities to preserve cash flow. In addition, trust preferred securities have proven to be a useful source of capital funding for BHCs, which often downstream the proceeds in the form of common stock to subsidiary banks, thereby strengthening the banks' capital bases. Trust preferred securities are available to absorb losses

5. U.S. depository institutions are defined to include branches (foreign and domestic) of federally insured banks and depository institutions chartered and headquartered in the 50 states of the United States, the District of Columbia, Puerto Rico, and U.S. territories and possessions. The definition encompasses banks, mutual or stock savings banks, savings or building and loan associations, cooperative banks, credit unions, and international banking facilities of domestic banks.

6. For this purpose, a foreign bank is defined as an institution that engages in the business of banking; is recognized as a bank by the bank supervisory or monetary authorities of the country of its organization or principal banking operations; receives deposits to a substantial extent in the regular course of business; and has the power to accept demand deposits.

throughout the BHC and do not affect the BHC's liquidity position. In addition, trust preferred securities are relatively simple, standardized, and well-understood instruments that are widely issued by both corporate and banking organizations. Moreover, issuances of trust preferred securities tend to be broadly distributed and transparent and, thus, easy for the market to track. A banking organization that wishes to issue trust preferred securities and include them in tier 1 capital must first consult with the Federal Reserve.

A key consideration of the Board has been the ability of trust preferred securities to provide financial support to a consolidated BHC because of their deep subordination and the ability of the BHC to defer dividends for up to 20 consecutive quarters. Trust preferred securities, like other forms of minority interest, are not included in GAAP equity and cannot forestall a BHC's insolvency. Nevertheless, trust preferred securities are available to absorb losses more broadly than most other minority interest in the consolidated banking organization is able to because the issuing trust's sole asset is a deeply subordinated note of its parent BHC. Thus, if a BHC defers payments on its junior subordinated notes underlying the trust preferred securities, the BHC can use the cash flow anywhere within the consolidated organization.

Qualifying trust preferred securities must allow for dividends to be deferred for at least 20 consecutive quarters without an event of default, except that the note may provide for an event of default and the acceleration of principal and unpaid interest, giving investors the right to take hold of the subordinated note issued by the BHC, upon (1) nonpayment for 20 or more consecutive quarters or (2) termination of the trust without redemption of the trust preferred securities, distribution of the notes to investors, or assumption of the obligation by a successor to the BHC. The required notification period for such deferral must be reasonably short, no more than 15 business days prior to the payment date.

The sole asset of the trust must be a junior subordinated note issued by the sponsoring banking organization that has a minimum maturity of 30 years and is subordinated with regard to both liquidation and priority of periodic payments to all senior and subordinated debt of the sponsoring banking organization (other than other junior subordinated notes underlying trust preferred securities). Otherwise the terms of a junior subordinated note must mirror those of the pre-

ferred securities issued by the trust.^{6a} The note must comply with section II.A.2.d. of the capital guidelines and the Federal Reserve's subordinated debt policy statement set forth in 12 C.F.R. 250.166^{6b} except that the note may provide for an event of default and the acceleration of principal and accrued interest upon (1) nonpayment of interest for 20 or more consecutive quarters or (2) termination of the trust without redemption of the trust preferred securities, distribution of the notes to investors, or assumption of the obligation by a successor to the banking organization.

In the last five years before the maturity of the note, the outstanding amount of the associated trust preferred securities is excluded from tier 1 capital and included in tier 2 capital, where the trust preferred securities are subject to the amortization provisions and quantitative restrictions set forth in sections II.A.2.d.iii. and iv. as if the trust preferred securities were limited-life preferred stock.

When a banking organization hedges trust preferred stock through an interest-rate swap with a deferral feature, the deferral terms on the swap must be symmetrical for both the organization and its counterparty and must not have

6a. 1 Under generally accepted accounting principles (GAAP), the trust issuing the preferred securities generally is not consolidated on the banking organization's balance sheet; rather the underlying subordinated note is recorded as a liability on the organization's balance sheet. Only the amount of the trust preferred securities issued, which generally is equal to the amount of the underlying subordinated note less the amount of the sponsoring banking organization's common equity investment in the trust (which is recorded as an asset on the banking organization's consolidated balance sheet), may be included in tier 1 capital. Because this calculation method effectively deducts the banking organization's common stock investment in the trust in computing the numerator of the capital ratio, the common equity investment in the trust should be excluded from the calculation of risk-weighted assets in accordance with footnote 17 of the capital guidelines. Where a banking organization has issued trust preferred securities as part of a pooled issuance, the organization generally must not buy back a security issued from the pool. Where a banking organization does hold such a security (for example, as a result of an acquisition of another banking organization), the amount of the trust preferred securities includable in regulatory capital must, consistent with section II.(i) of the capital guidelines, be reduced by the notional amount of the banking organization's investment in the security issued by the pooling entity.

6b. 2 Trust preferred securities issued before April 15, 2005, generally would be includable in tier 1 capital despite noncompliance with sections II.A.1.c.iv. or II.A.2.d. of the capital guidelines or 12 C.F.R. 250.166 provided the non-complying terms of the instrument (1) have been commonly used by banking organizations, (2) do not provide an unreasonably high degree of protection to the holder in circumstances other than bankruptcy of the banking organization, and (3) do not effectively allow a holder in due course of the note to stand ahead of senior or subordinated debt holders in the event of bankruptcy of the banking organization.

the effect of draining the organization's resources in a time of stress. The swap contract, for example, must not provide that the counterparty may defer, on a cumulative basis, its swap payments due to the banking organization during a trust preferred deferral period when the banking organization must continue to make payments to the counterparty. A plain-vanilla swap, when neither the banking organization nor its counterparty may defer payments, generally is an acceptable instrument for hedging the interest-rate risk on trust preferred stock included in tier 1 capital. Trust preferred stock issues may not be included in tier 1 capital if they are covered by an interest-rate derivative contract with asymmetrical deferral terms. (See SR-02-10.)

4060.3.2.1.1.9 GAAP Accounting for Trust Preferred Securities

The Financial Accounting Standards Board (FASB) revised the accounting treatment of trust preferred securities in January 2003 through the issuance of its FASB Interpretation No. 46, "Consolidation of Variable Interest Entities (FIN 46)." Since then the accounting industry and BHCs have dealt with the application of FIN 46 to the consolidation by BHC sponsors of trusts issuing trust preferred securities. In late December 2003, when FASB issued a revised version of FIN 46 (FIN 46R), the accounting authorities generally concluded that such trusts must be deconsolidated from their BHC sponsors' financial statements under generally accepted accounting principles (GAAP). Therefore, for GAAP accounting purposes, trust preferred securities generally will continue to be accounted for as equity at the level of the trust that issues them, but the instruments may no longer be treated as minority interest in the equity accounts of a consolidated subsidiary on a BHC's consolidated balance sheet. Instead, under FIN 46 and FIN 46R, a BHC must reflect on its consolidated balance sheet the deeply subordinated note the BHC issued to the deconsolidated SPE.

A change in the GAAP accounting for a capital instrument does not necessarily change the regulatory capital treatment of that instrument. Although GAAP informs the definition of regulatory capital, the Board may decide not to use GAAP accounting concepts in its definition of tier 1 or tier 2 capital. Regulatory capital requirements are regulatory constructs designed to ensure the safety and soundness of banking organizations, not accounting designations established to ensure the transparency of financial statements. These differences are only between

the definition of equity for purposes of GAAP and the definition of tier 1 capital for purposes of the Board's regulatory capital requirements for banking organizations.

Nevertheless, consistent with long-standing Board direction, BHCs are required to follow GAAP for regulatory reporting purposes. Thus, BHCs should, for both accounting and regulatory reporting purposes, determine the appropriate application of GAAP (including FIN 46 and FIN 46R) to their trusts issuing trust preferred securities. Accordingly, there should be no substantive difference in the treatment of trust preferred securities issued by such trusts, or the underlying junior subordinated debt, for purposes of regulatory reporting and GAAP accounting.

4060.3.2.1.1.10 Asset-Driven Preferred Securities

In addition to issuing trust preferred securities, banking organizations have also issued asset-driven securities, particularly real estate investment trust (REIT) preferred securities. REIT preferred securities generally are issued by SPE subsidiaries of a bank that qualify as REITs for tax purposes. In most cases, the REIT issues noncumulative perpetual preferred securities, generally noncumulative, to the market and uses the proceeds to buy mortgage-related assets from its sole common shareholder, its parent bank. By qualifying as a REIT under the tax code, the SPE's income is not subject to tax at the entity level but is taxable only as income to the REIT's investors upon distribution. Two key qualifying criteria for REITs are that REITs must hold predominantly real estate assets and must pay out annually a substantial portion of their income to investors. To avoid a situation in which preferred stock investors in a REIT subsidiary of a failing bank are effectively overcollateralized by high-quality mortgage assets of the parent bank, the federal banking agencies have required REIT preferred securities to have an exchange provision to qualify for inclusion in tier 1 capital. The exchange provision provides that upon the occurrence of certain events, such as the parent bank's becoming undercapitalized or being placed into receivership, the REIT preferred securities will be exchanged upon the directive of the parent bank's primary federal supervisor for directly issued perpetual preferred securities of the parent bank with gen-

erally identical terms. In the absence of the exchange provision, the REIT preferred securities would provide little support to a deteriorating or failing parent bank or to the FDIC, despite possibly comprising a substantial amount of the parent bank's tier 1 capital (in the form of minority interest).

While some banking organizations have issued a limited amount of REIT preferred and other asset-driven securities, most BHCs prefer to issue trust preferred securities because they are relatively simple and standard instruments, do not tie up liquid assets, are easier and more cost-efficient to issue and manage, and are more transparent and better understood by the market. Also, BHCs generally prefer to issue trust preferred securities at the holding company level rather than issue REIT preferred securities at the bank level because doing so gives them greater flexibility in using the proceeds of such issuances.

4060.3.2.1.1.11 Inclusion of an Operating Subsidiary's Perpetual Preferred Stock in Minority Interest

Whenever a banking organization has included perpetual preferred stock of an operating subsidiary in minority interest, a possibility exists that such capital has been issued in excess of the subsidiary's needs, for the purpose of raising cheaper capital. Stock issued under these circumstances may, in substance if not in legal form, be secured by the subsidiary's assets. If the subsidiary fails, the outside preferred investors would have a claim on the subsidiary's assets that is senior to the claim that the banking organization, as a common shareholder, has on those assets. Therefore, as a general rule, issuances in excess of a subsidiary's needs do not qualify for inclusion in capital. The possibility that a secured arrangement exists should be considered if the subsidiary lends significant amounts of funds to the parent banking organization, is unusually well capitalized, has cash flow in excess of its operating needs, holds a significant amount of assets with minimal credit risk (for example, U.S. Treasury securities) that are not consistent with the subsidiary's operations, or has issued preferred stock at a significantly lower rate than the parent could obtain for a direct issue.

Some bank holding companies may use a nonoperating subsidiary or SPE to issue perpetual preferred stock to outside investors. Such a subsidiary may be set up offshore so that it can receive favorable tax treatment for the dividends paid on the stock. In such arrangements, a strong presumption exists that the stock is, in effect, secured by the assets of the subsidiary. Preferred stock issued by a subsidiary and collateralized by the subsidiary's assets is not included in tier 1 or tier 2 capital unless approved by the Federal Reserve because of the need to verify the incorporation of prudential features warranting capital inclusion.

Banking organizations may also use operating or nonoperating subsidiaries to issue subordinated debt. As with perpetual preferred stock issued through such subsidiaries, it is possible that such debt is in effect secured and therefore not includable in capital.

4060.3.2.1.1.12 Forward Equity Transactions

Banking organizations have engaged in various types of forward transactions relating to the repurchase of their common stock. In these transactions, the banking organization enters into an arrangement with a counterparty, usually an investment bank or another commercial bank, under which the counterparty purchases common shares of the banking organization, either in the open market or directly from the institution. The banking organization agrees that it will repurchase those shares at an agreed-on forward price at a later date (typically three years or less from the execution date of the agreement). These transactions are used to lock in stock repurchases at price levels that are perceived to be advantageous and are also a means of managing regulatory capital ratios.

Banking organizations have generally continued to treat shares under forward equity arrangements as tier 1 capital. However, these transactions can impair the permanence of the shares and typically have certain features that are undesirable from a supervisory point of view. For these reasons, shares covered by these arrangements have qualities that are inconsistent with tier 1 capital status.^{6c} Accordingly, any common stock covered by forward equity transactions entered into after the issuance of SR-01-27 (November 9, 2001) will be excluded from the

6c. Section 4060.3.2.1.1.1 states that "a capital instrument that is not permanent...is not deemed to be common stock, regardless of whether it is called common stock." See also section 3020.1 of the *Commercial Bank Examination Manual*.

tier 1 capital of a bank holding company (or a state member bank), other than those transactions specified for deferred compensation or other employee benefit plans. This exclusion applies even if the transactions were executed under a currently existing master agreement. The amount to be excluded is equal to the common stock, surplus, and retained earnings associated with the shares. This guidance does not apply to shares covered under traditional stock buyback programs that do not involve forward agreements.

4060.3.2.1.2 Tier 2 Capital

Tier 2 capital consists of (1) a limited amount of the allowance for loan and lease losses;^{6d} (2) perpetual preferred stock (original term of 20 years or more) including related surplus (also includes cumulative perpetual preferred stock exceeding its tier 1 limitation, including auction-rate preferred stock, or any other perpetual preferred stock in which the dividend rate is reset periodically, in whole or in part, based on the holding company's financial condition); (3) hybrid capital instruments, perpetual debt, and mandatory convertible debt securities; (4) limited amounts (50 percent of tier 1 capital net of goodwill and other intangibles) of term subordinated debt and intermediate-term preferred stock, including related surplus; and (5) limited unrealized holding gains on equity securities. Tier 2 capital may not exceed tier 1 capital (net of goodwill, other intangible assets, and interest-only strips receivable and nonfinancial equity investments that are required to be deducted in accordance with section II.B).

The amount of mandatory convertible securities that have the proceeds of common or perpetual preferred stock dedicated to retire or redeem them and that have a maximum maturity of 12 years should be treated as term subordinated debt. Mandatory convertible securities, net of the stock dedicated to redeem or retire the issues, are included within tier 2 on an unlimited basis.

There is a limit on the amount of unrealized holding gains on equity securities and the unrealized gains (losses) on other assets. Up to 45 percent of pretax net unrealized holding gains (that is, the excess, if any, of the fair value over historical cost) on available-for-sale equity securities, with readily determinable fair values, may be included in supplementary capital. How-

ever, the Federal Reserve may exclude all or a portion of these unrealized gains from tier 2 capital if it determines that the equity securities are not prudently valued. Unrealized gains (losses) on other types of assets, such as bank premises and available-for-sale debt securities, are not included in supplementary capital. The Federal Reserve may take these unrealized gains (losses) into account as additional factors when assessing an institution's overall capital adequacy.

4060.3.2.1.2.1 Subordinated Debt and Intermediate-Term Preferred Stock

Subordinated debt and intermediate-term preferred stock must have an original weighted average maturity of at least five years to qualify as tier 2 capital. If the holder has the option to require the issuer to redeem, repay, or repurchase the instrument prior to the original stated maturity, maturity would be defined, for risk-based capital purposes, as the earliest possible date on which the holder can put the instrument back to the issuing banking organization. The average maturity of an obligation whose principal is repayable in scheduled periodic payments (for example, a so-called serial redemption issue) is the weighted average of the maturities of all such scheduled repayments.

A state member bank may not repay, redeem, or repurchase a subordinated debt issue without the Federal Reserve's prior written approval. Prior written approval is not required for BHCs. They should consult with the Federal Reserve before redeeming subordinated debt. (See 12 C.F.R. 250.166(f)(2).)

Close scrutiny should be given to terms that permit the holder to accelerate payment of principal upon the occurrence of certain events. The only acceleration clauses acceptable in a subordinated debt issue included in tier 2 capital are those that are triggered by bankruptcy or the receivership of a major banking subsidiary (in the case of a bank holding company) or receivership (in the case of a bank.)^{6e} (See SR-92-37.) Terms that permit the holder to accelerate payment of principal upon the occurrence of other

6d. This allowance is limited to 1.25 percent of risk-weighted assets.

6e. A provision in bank holding company subordinated debt that permits acceleration in the event a major bank subsidiary enters into receivership would not jeopardize the issue's tier 2 capital status. A provision permitting acceleration in the event that any other type of affiliate of the issuer entered into bankruptcy or receivership would not be acceptable in a subordinated debt issue included in capital.

events jeopardize the subordination of the debt because such terms could permit debtholders in a troubled institution to be paid out before the depositors. In addition, debt whose terms permit holders to accelerate payment of principal upon the occurrence of events other than insolvency does not meet the minimum five-year maturity requirement for debt capital instruments. Holders of such debt have the right to put the debt back to the issuer upon the occurrence of the named events, which could happen on a date well in advance of the debt's stated maturity.

Close scrutiny should also be given to the terms of those debt issues if an event of default is defined more broadly than insolvency or a failure to pay interest or principal when due. There is a strong possibility that such terms are inconsistent with safe and sound banking practice and that, accordingly, the debt issue should not be included in capital. Concern is heightened when an event of default gives the holder the right to accelerate payment of principal or when other borrowings contain cross-default clauses. Some events of default, such as making additional borrowings in excess of a certain amount, may unduly restrict the day-to-day operations. Other events of default, such as change of control or disposal of a banking organization subsidiary, may limit the flexibility of management or supervisors to work out the problems of a troubled organization. Still other events of default, such as failure to maintain certain capital ratios or rates of return or to limit the amount of nonperforming assets or chargeoffs to a certain level, may be intended to allow the debtholder to be made whole before a deteriorating banking organization becomes truly troubled. Debt issues that include any of these types of events of default are not truly subordinated and should not be included in capital. Likewise, bank holding companies should not include in capital debt issues that otherwise contain terms or covenants that could adversely affect the issuer's liquidity; unduly restrict management's flexibility to run the organization, particularly in times of financial difficulty; or limit the regulator's ability to resolve problem situations.

Certain terms found in subordinated debt, however, may provide protection to investors without adversely affecting the overall benefits of the instrument to the organization, and thus would be acceptable for subordinated debt to be included in capital. Among such acceptable terms would be a provision that prohibits a bank

holding company from merging, consolidating, or selling substantially all of its assets unless the new entity assumes the subordinated debt. Another acceptable provision would be the inclusion as an event of default of the failure to pay principal and interest on a timely basis or to make mandatory sinking-fund deposits, so long as such event of default does not allow the debtholders to accelerate the repayment of principal. (See SR-92-37.)

Debt issues, including mandatory convertible securities, that tie interest payments to the financial condition of the borrower generally should not be included in capital. Such payments may be linked to the financial condition of an institution through various ways, such as (1) an auction-rate mechanism, which is a preset schedule-mandating interest-rate increase either over the passage of time or as the credit rating of the bank holding company declines,^{6f} or (2) a term that raises the interest rate if payment is not made in a timely fashion. As the financial condition of a bank holding company declines, it is faced with higher and higher payments on its credit-sensitive subordinated debt at a time when it most needs to conserve its resources. Thus, credit-sensitive debt does not provide the support expected of a capital instrument to an institution whose financial condition is deteriorating; rather, the credit-sensitive feature can accelerate depletion of the organization's resources and increase the likelihood of default on the debt. While such terms may be acceptable in perpetual preferred stock qualifying for tier 2 capital, they are not acceptable in a capital debt issue because a banking organization in a deteriorating financial condition may not have the option available in equity issues of eliminating the higher payments without going into default. If a bank holding company has included in its capital subordinated debt issued by an operating or nonoperating subsidiary, it is possible that the debt is in effect secured and, thus, not includable in capital.

Subordinated debt included in tier 2 capital

^{6f}. Although payment on debt whose interest rate increases over time may not on the surface appear to be directly linked to the financial condition of the issuing banking organization, such debt (sometimes referred to as expanding- or exploding-rate debt) has a strong potential to be credit-sensitive in substance. Banking organizations whose financial condition has strengthened are more likely to be able to refinance the debt at a lower rate than that mandated by the preset increase, whereas those banking organizations whose condition has deteriorated are less likely to be able to do so. Moreover, just when these latter institutions would be in the most need of conserving capital, they would be under strong pressure to redeem the debt as an alternative to paying higher rates and therefore would accelerate depletion of their resources.

must comply with the Federal Reserve's subordinated debt policy statement set forth in 12 C.F.R. 250.166.^{6g} Accordingly, such subordinated debt must meet the following requirements:

1. The subordinated debt must be unsecured.
2. The subordinated debt must clearly state on its face that it is not a deposit and is not insured by a federal agency.
3. The subordinated debt must not have credit-sensitive features or other provisions that are inconsistent with safe and sound banking practice.
4. Subordinated debt issued by a subsidiary U.S. depository institution or foreign bank of a bank holding company must be subordinated in right of payment to the claims of all the institution's general creditors and depositors, and generally must not contain provisions permitting debt holders to accelerate payment of principal or interest upon the occurrence of any event other than receivership of the institution. Subordinated debt issued by a bank holding company or its subsidiaries that are neither U.S. depository institutions nor foreign banks must be subordinated to all senior indebtedness of the issuer; that is, the debt must be subordinated at a minimum to all borrowed money, similar obligations arising from off-balance sheet guarantees and direct-credit substitutes, and obligations associated with derivative products such as interest-rate and foreign-exchange contracts, commodity contracts, and similar arrangements. Subordinated debt issued by a bank holding company or any of its subsidiaries that is not a U.S. depository institution or foreign bank must not contain provisions permitting debt holders to accelerate the payment of principal or interest upon the occurrence of any event other than the bankruptcy of the bank holding company or the receivership of a major subsidiary depository institution. Thus, a provision permitting acceleration in the event that any other affiliate of the

bank holding company issuer enters into bankruptcy or receivership makes the instrument ineligible for inclusion in tier 2 capital.

As a limited-life capital instrument approaches maturity, it begins to take on characteristics of a short-term obligation. For this reason, the outstanding amount of term subordinated debt and limited-life preferred stock eligible for inclusion in tier 2 capital is reduced, or discounted, as these instruments approach maturity: One-fifth of the outstanding amount is excluded each year during the instrument's last five years before maturity. When remaining maturity is less than one year, the instrument is excluded from tier 2 capital.

The aggregate amount of term subordinated debt (excluding mandatory convertible debt) and limited-life preferred stock as well as, beginning March 31, 2009, qualifying trust preferred securities and class C minority interest in excess of the limits set forth in section II.A.1.b.i. that may be included in tier 2 capital is limited to 50 percent of tier 1 capital (net of goodwill and other intangible assets required to be deducted in accordance with section II.B.1.b.). Amounts of these instruments in excess of this limit, although not included in tier 2 capital, will be taken into account by the Federal Reserve in its overall assessment of a banking organization's funding and financial condition.

4060.3.2.1.3 Deductions from Tier 1 and Tier 2 Capital

The risk-based capital guidelines require that 50 percent of the aggregate amount of capital investments in unconsolidated banking and finance subsidiaries should be deducted from the bank holding company's tier 1 capital and 50 percent from its tier 2 capital. If the amount of tier 2 capital is insufficient for the required deduction, the additional amount needed would be deducted from tier 1 capital. Reciprocal holdings of other banking organizations' capital instruments are to be deducted from the sum of tier 1 and tier 2 capital.

4060.3.2.2 Procedures for Risk Weighting of On- and Off-Balance Sheet Items

The risk-based capital guidelines establish four general categories of credit risk. These catego-

^{6g}. The subordinated debt policy statement set forth in 12 C.F.R. 250.166 notes that certain terms found in subordinated debt may provide protection to investors without adversely affecting the overall benefits of the instrument to the issuing banking organization and, thus, would be acceptable for subordinated debt included in capital. For example, a provision that prohibits a bank holding company from merging, consolidating, or selling substantially all of its assets unless the new entity redeems or assumes the subordinated debt or that designates the failure to pay principal and interest on a timely basis as an event of default would be acceptable, so long as the occurrence of such events does not allow the debt holders to accelerate the payment of principal or interest on the debt.

ries of credit risk reflect the nature and quality of collateral, guarantees, and organizations issuing or backing obligations. Assets and credit-equivalent amounts of off-balance sheet items are allocated to the various categories, which are assigned weights of 0 percent, 20 percent, 50 percent, and 100 percent, depending on the perceived level of credit risk to the banking organization. (See 12 C.F.R. 225, appendix A, section III, for a more detailed listing of the assets assigned to each risk-weight category.)

The majority of the items will fall in the 100 percent risk-weight category. A brief explanation of the components of each category follows. For more detailed information, see the capital adequacy guidelines.

4060.3.2.2.1 Risk Categories

4060.3.2.2.1.1 Category 1: Zero Percent

Category 1 includes cash (domestic and foreign) owned and held in all offices of the bank or in transit, as well as gold bullion held in the bank's own vaults or in another bank's vaults on an allocated basis to the extent it is offset by gold bullion liabilities. The category also includes all direct claims on (including securities, loans, and leases), and the portions of claims that are directly and unconditionally guaranteed by, the central governments of the Organization for Economic Cooperation and Development (OECD) countries and U.S. government agencies, as well as all direct local currency claims on,^{6h} and the portions of local currency claims that are directly and unconditionally guaranteed by, the central governments of non-OECD countries, to the extent that the bank has liabilities booked in that currency. A claim is not considered to be unconditionally guaranteed by a central government if the validity of the guarantee depends on some affirmative action by the holder or a third party. Generally, securities guaranteed

by the U.S. government or its agencies that are actively traded in financial markets, such as Government National Mortgage Association (GNMA) securities, are considered to be unconditionally guaranteed. This zero percent category also includes claims collateralized (1) by cash on deposit in the bank or (2) by securities issued or guaranteed by OECD central governments or U.S. government agencies for which a positive margin of collateral is maintained on a daily basis, fully taking into account any change in the bank's exposure to the obligor or counterparty under a claim in relation to the market value of the collateral held in support of that claim. This category also includes ABCP (1) purchased by a BHC on or after September 19, 2008, from an SEC-registered open-end investment company that holds itself out as a money market mutual fund under SEC Rule 2a-7 (17 CFR 270.2a-7) and (2) pledged by the BHC to a Federal Reserve Bank to secure financing from the ABCP lending facility (AMLF) established by the Board on September 19, 2008. (See 12 C.F.R. 225, appendix A and 74 *Fed. Reg.* 6224, February 6, 2009.)

4060.3.2.2.1.2 Category 2: 20 percent

Category 2 includes cash items in the process of collection, both foreign and domestic; short-term claims on (including demand deposits), and the portions of short-term claims that are guaranteed by, U.S. depository institutions and foreign banks; and long-term claims on, and the portions of long-term claims that are guaranteed by, U.S. depository institutions and OECD banks. This category also includes the portions of claims that are conditionally guaranteed by OECD central governments and U.S. government agencies,⁶ⁱ as well as the portions of local currency claims that are conditionally guaranteed by non-OECD central governments, to the extent that the bank has liabilities booked in that currency. In addition, this category includes claims on, and the portions of claims that are guaranteed by, U.S. government-sponsored agencies and claims on, and the portions of claims guaranteed by, the International Bank for Reconstruction and Development (the World Bank), the International Finance Corporation, the Inter-American Development Bank, the Asian Development

6h. Direct claims on and claims unconditionally guaranteed by the FDIC, such as FDIC-insured deposits, pre-paid assessments of deposit insurance premiums, debt guaranteed under the FDIC's Temporary Liquidity Guarantee Program, and similarly guaranteed debt, may be assigned a zero risk weight. Because the structural arrangements for these agreements vary depending on the specific terms of each agreement, BHCs and institutions should consult with their primary federal regulator to determine the appropriate risk-based capital treatment for specific loss-sharing agreements. (See SR-10-4 and its interagency attachment.)

6i. Loss-sharing agreements entered into by the FDIC with acquirers of assets from failed institutions are considered conditional guarantees for risk-based capital purposes due to contractual conditions that acquirers must meet. The guaranteed portion of assets subject to a loss-sharing agreement may be assigned a 20 percent risk weight.

opment Bank, the African Development Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the Nordic Investment Bank, and other multilateral lending institutions or regional development banks in which the U.S. government is a shareholder or contributing member. General obligation claims on, or portions of claims guaranteed by the full faith and credit of, states or other political subdivisions of the United States or other countries of the OECD-based group are also assigned to this category. Category 2 also includes the portions of claims (including repurchase transactions) that are (1) collateralized by cash on deposit in the bank or by securities issued or guaranteed by OECD central governments or U.S. government agencies that do not qualify for the zero percent risk-weight category; (2) collateralized by securities issued or guaranteed by U.S. government-sponsored agencies; or (3) collateralized by securities issued by multilateral lending institutions or regional development banks in which the U.S. government is a shareholder or contributing member.

This risk category also includes claims^{6j} on, and claims guaranteed by, a qualifying securities firm^{6k} incorporated in the United States or another member of the OECD-based group of countries provided that (1) the qualifying securities firm has a long-term issuer credit rating, or a rating on at least one issue of long-term debt, in one of the three highest investment-grade rating categories from a nationally recognized statistical rating organization,^{6l} and (2) the claim is guaranteed by the firm's parent company, and the parent company has such a rating. If ratings are available from more than one rating agency,

the lowest rating will be used to determine whether the rating requirement has been met. This category also includes certain collateralized claims on, or guaranteed by, a qualifying securities firm in such a country, without regard to satisfaction of the rating standard, provided that the claim arises under a contract that (1) is a reverse-repurchase/repurchase agreement or securities-lending/borrowing transaction executed using standard industry documentation; (2) is collateralized by debt or equity securities that are liquid and readily marketable; (3) is marked to market daily; (4) is subject to a daily margin-maintenance requirement under the standard industry documentation; and (5) can

6j. Claims on a qualifying securities firm that the firm, or its parent company, uses to satisfy its applicable capital requirements are not eligible for this risk weight.

6k. With regard to securities firms incorporated in the United States, qualifying securities firms are those securities firms that are broker-dealers registered with the Securities and Exchange Commission (SEC) and that are in compliance with the SEC's net capital rule, 17 C.F.R. 240.15c3-1. With regard to securities firms incorporated in other countries in the OECD-based group of countries, qualifying securities firms are those securities firms that a banking organization is able to demonstrate are subject to consolidated supervision and regulation (covering their direct and indirect subsidiaries, but not necessarily their parent organizations) comparable to that imposed on banks in OECD countries. Such regulation must include risk-based capital requirements comparable to those applied to banks under the Basel Accord.

6l. A nationally recognized statistical rating organization (NRSRO) is an entity recognized by the Division of Market Regulation of the Securities and Exchange Commission, (the commission) or any successor division, as a nationally recognized statistical rating organization for various purposes, including the commission's uniform net capital requirements for brokers and dealers (17 C.F.R. 240.15c3-1).

be liquidated, terminated, or accelerated immediately in bankruptcy or a similar proceeding, and the security or collateral agreement will not be stayed or avoided, under applicable law of the relevant jurisdiction.⁷

4060.3.2.2.1.3 Category 3: 50 percent

Category 3 includes loans fully secured by first liens on one- to four-family residential properties (either owner-occupied or rented), or on multifamily residential properties, that meet certain criteria. To be included in category 3, loans must have been made in accordance with prudent underwriting standards, be performing in accordance with their original terms, and not be 90 days or more past due or carried in nonaccrual status. The following additional criteria must be applied to a loan secured by a multifamily residential property that is included in this category: (1) All principal and interest payments on the loan must have been made on time for at least the year preceding placement in this category, or, in the case of an existing property owner who is refinancing a loan on that property, all principal and interest payments on the loan being refinanced must have been made on time for at least the year preceding placement in this category; (2) amortization of the principal and interest must occur over a period of not more than 30 years, and the minimum original maturity for repayment of principal must not be less than seven years; and (3) the annual net operating income (before debt service) generated by the property during its most recent fiscal year must not be less than 120 percent of the loan's current annual debt service (115 percent if the loan is based on a floating interest rate) or, in the case of a cooperative or other not-for-profit housing project, the property must generate sufficient cash flow to provide comparable protection to the institution.

Also included in category 3 are privately issued mortgage-backed securities, provided that (1) the structure of the security meets the criteria described in section III.B.3. of the risk-based capital guidelines (12 C.F.R. 225, appendix A); (2) if the security is backed by a pool of conven-

tional mortgages on one- to four-family residential or multifamily residential properties, each underlying mortgage meets the criteria described above for eligibility for the 50 percent risk category at the time the pool is originated; (3) if the security is backed by privately issued mortgage-backed securities, each underlying security qualifies for the 50 percent risk category; and (4) if the security is backed by a pool of multifamily residential mortgages, principal and interest payments on the security are not 30 days or more past due. Privately issued mortgage-backed securities that do not meet these criteria or that do not qualify for a lower risk weight are generally assigned to the 100 percent risk category. Also assigned to category 3 are revenue (nongeneral obligation) bonds or similar obligations, including loans and leases, that are obligations of states or other political subdivisions of the United States (for example, municipal revenue bonds) or other countries of the OECD-based group, but for which the government entity is committed to repay the debt with revenues from the specific projects financed, rather than from general tax funds. Credit-equivalent amounts of derivative contracts involving standard risk obligors (that is, obligors whose loans or debt securities would be assigned to the 100 percent risk category) are included in the 50 percent category, unless they are backed by collateral or guarantees that allow them to be placed in a lower risk category.

4060.3.2.2.1.4 Category 4: 100 percent

All assets not included in the categories above are assigned to category 4, which comprises standard risk assets. The bulk of the assets typically found in a loan portfolio would be assigned to the 100 percent category.

Category 4 includes long-term claims on, and the portions of long-term claims that are guaranteed by, non-OECD banks, and all claims on non-OECD central governments that entail some degree of transfer risk. This category includes all claims on foreign and domestic private-sector obligors not included in the categories above (including loans to nondepository financial institutions and bank holding companies); claims on commercial firms owned by the public sector; customer liabilities to the bank on acceptances outstanding that involve standard risk claims, investments in fixed assets, premises, and other real estate owned; common and preferred stock of corporations, including stock

7. For example, a claim is exempt from the automatic stay in bankruptcy in the United States if it arises under a securities contract or a repurchase agreement subject to section 555 or 559 of the Bankruptcy Code, respectively (11 U.S.C. 555 or 559); a qualified financial contract under section 11(e)(8) of the Federal Deposit Insurance Act (12 U.S.C. 1821(e)(8)); or a netting contract between financial institutions under sections 401–407 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (12 U.S.C. 4401–4407) or the Board's Regulation EE (12 C.F.R. 231).

acquired for debts previously contracted; all stripped mortgage-backed securities and similar instruments; and commercial and consumer loans (except those assigned to lower risk categories due to recognized guarantees or collateral and loans secured by residential property that qualify for a lower risk weight).

This category also includes industrial-development bonds and similar obligations issued under the auspices of states or political subdivisions of the OECD-based group of countries for the benefit of a private party or enterprise when that party or enterprise, not the government entity, is obligated to pay the principal and interest. All obligations of states or political subdivisions of countries that do not belong to the OECD-based group are also assigned to category 4. The following assets are assigned a risk weight of 100 percent if they have not been deducted from capital: investments in unconsolidated companies, joint ventures, or associated companies; instruments that qualify as capital that are issued by other banking organizations; and any intangibles, including those that may have been grandfathered into capital.

4060.3.2.2.2 Application of the Risk Weights

The appropriate aggregate dollar value of the amount in each category is multiplied by the risk weight associated with that category. The resulting weighted values for each of the risk categories are added together.

Off-balance-sheet items are incorporated into the risk-based capital ratio through a two-step process. First, a credit-equivalent amount⁸ for the item, except for direct-credit substitutes and recourse obligations, is calculated by multiplying the item by a credit-conversion factor. Second, the credit-equivalent amount of the off-balance-sheet item is then categorized in the same manner as on-balance-sheet items, that is, by credit risk, according to the obligor or, if relevant, the guarantor or nature of the collateral. The credit-conversion factors, that is, fac-

tors ranging from 0 to 100 percent,⁹ are intended to reflect the risk characteristics of the activity in terms of an on-balance-sheet equivalent. The resulting sum of the risk-adjusted on- and off-balance-sheet items is the bank holding company's total risk-weighted assets, which comprises the denominator of the risk-based capital ratio. Generally, if an item may be assigned to more than one risk category, that item should be assigned to the category that has the lowest risk weight.

Collateral guarantees and other considerations. Under the guidelines, the primary determinant of the risk category of a particular on- or off-balance-sheet item is the obligor or, if relevant, the guarantor or nature of the collateral. To a limited extent, collateral or guarantees securing some obligations may be used to place an item or items in lower risk weights than would be available to the obligor. The forms of collateral that are formally recognized and available for this purpose are cash on deposit in subsidiary lending institutions;¹⁰ securities issued or guaranteed by the central governments of the OECD-based group of countries, U.S. government agencies, or U.S. government-sponsored agencies; and securities issued by multilateral lending institutions or regional development banks. Obligations that are fully secured by such collateral are assigned to the 20 percent risk category.

In order for a claim to be considered collateralized for risk-based capital purposes, the underlying arrangements must provide that the claim will be secured by recognized collateral throughout its term. A commitment may be considered collateralized for risk-based capital purposes to the extent that its terms provide that advances made under the commitment will be secured throughout their term.

The market value of eligible securities used as collateral should be used to determine whether an obligation is partially or fully secured. For partially secured obligations, the secured portion is assigned a 20 percent risk weight. Any unsecured portion is assigned the risk weight appropriate for the obligor or guarantor, if any.

8. For interest-rate and foreign-exchange contracts, the credit-equivalent amount is determined by multiplying the notional amount by a conversion factor (which is different for contracts maturing in one year or less and those maturing in over a year) and adding the resulting amount to the positive mark-to-market values of the contracts. The maximum risk weight applied to interest-rate and exchange-rate contracts is 50 percent.

9. Interest-rate and exchange-rate contracts use conversion factors significantly below those used for other off-balance-sheet activities. These factors are assigned by remaining maturity, one year or less or more than one year, and range from 0 to 5 percent.

10. With regard to syndicated credits secured by cash on deposit in the lead institution, there is a limited exception to the rule that cash must be on deposit in the lending institution to be recognized as collateral. A lending institution participating in the syndication may treat its pro rata share of the credit as collateralized if it has a perfected interest in its pro rata share of the collateral.

The extent to which an off-balance-sheet item is secured by collateral is determined by the degree to which the collateral covers the face amount of the item before it is converted to a credit-equivalent amount and assigned to a risk category.

Certain guarantees are recognized for risk-based capital purposes as follows: guarantees of the OECD and non-OECD central governments; U.S. government agencies and U.S. government-sponsored agencies; state and local governments of the OECD-based group of countries; multilateral lending institutions and regional development banks; and U.S. depository institutions and foreign banks. If an obligation is partially guaranteed, the portion that is not fully covered is assigned the risk weight appropriate for the obligor or collateral, if any. An obligation that is covered by two types of guarantees having different risk weights is apportioned between the two risk categories appropriate for the guarantors. Direct-credit substitutes, assets transferred with recourse, and securities issued in connection with asset securitizations and structured financings are treated as described in section 4060.3.5.3.

4060.3.3 IMPLEMENTATION

The guidelines apply to those bank holding companies having \$500 million or more in assets on a consolidated basis. For bank holding companies having *less than* \$500 million in assets on a consolidated basis, the guidelines will apply only to their subsidiary banks unless (1) the parent bank holding company is engaged in a nonbank activity involving significant leverage (including off-balance-sheet activity) or (2) the parent holding company has a significant amount of outstanding debt that is held by the general public.

By year-end 1992 and thereafter, banking organizations are expected to meet the minimum risk-based capital ratio. The minimum ratio of capital to risk-weighted assets should be 8 percent or more with at least 4 percent taking the form of tier 1 capital. An assessment of the banking organization's capital adequacy should reflect the level and severity of the classified assets summarized in the examination and inspection.

Banking organizations that do not meet the minimum risk-based capital ratios, or that are considered to lack sufficient capital to support their activities, are expected to develop and implement capital plans acceptable to the Federal Reserve for achieving adequate levels of capital that will satisfy the provisions of the

guidelines or that will satisfy agreed-upon arrangements established with the Federal Reserve for designated banking organizations. In addition, such banking organizations should avoid any actions, including increased risk-taking or unwarranted expansion, that would lower or further erode their capital positions. In these cases, examiners are to review and comment on banking organizations' capital plans and their progress in meeting minimum risk-based capital requirements.

It would be appropriate to include comments on risk-based capital in the open section of the examination or inspection report when assessing the organization's capital adequacy. Banking organizations should be encouraged to establish as soon as possible capital levels and ratios that are consistent with their overall financial profiles. Examiner comments should address the adequacy of the banking organization's plans and progress toward meeting and maintaining the minimum capital ratios, according to the guidelines.

4060.3.4 DOCUMENTATION

Banking organizations are expected to have adequate systems in place to compute their risk-based capital ratios. Such systems should be sufficient to document the composition of the ratios for regulatory reporting and other supervisory purposes. Generally, supporting documentation will be expected to establish how banking organizations track and report their capital components and on- and off-balance-sheet items that are given preferential treatment. It may be necessary for examiners to reassign on- or off-balance-sheet items that are given a preferential risk weight to a weight of 100 percent, when supporting documentation is inadequate. Examiners are expected to verify that bank holding companies are correctly reporting the information requested on the holding companies' consolidated financial statements (FR Y-9C), which are used to compute the organization's risk-based capital ratios.

4060.3.5 SUPERVISORY CONSIDERATIONS FOR CALCULATING AND EVALUATING RISK-BASED CAPITAL

Examiners must consider certain requirements

and factors when assessing the risk-based capital ratios and the overall capital adequacy of banking organizations. Analysis of these requirements and factors may have a material impact on the amount of capital banking organizations must hold to appropriately support certain activities for on- and off-balance-sheet items. The treatment of the following such activities must be used when assessing compliance with the guidelines and overall capital adequacy of banking organizations.

- *Certain capital-adjustment considerations:*
 - investments and advances to unconsolidated banking and finance subsidiaries
 - review and monitoring of goodwill and certain other intangible assets
 - certain credit-enhancing interest-only strips (I/Os)
 - reciprocal holdings of banking organizations' capital instruments
 - deferred tax assets
 - nonfinancial equity investments
- *Certain balance-sheet activity considerations:*
 - investment in shares of a mutual fund
 - mortgage-backed securities
 - loans secured by first liens on one- to four-family residential properties
- *Certain off-balance-sheet activity considerations:*
 - small-business loans and leases on personal property
 - assets sold with recourse (FAS 140 sales)
 - securities lent
 - unused commitments
 - financial and performance standby letters of credit
 - avoidance of double-counting of interest-rate and exchange-rate contracts
 - treatment of commodity and equity swaps
 - netting of swaps and similar contracts
 - assets sold with recourse
- *Considerations in the overall assessment of capital adequacy:*
 - unrealized asset values
 - terms of subordinated debt and intermediate-term preferred stock
 - ineligible collateral and guarantees
 - overall asset quality
 - interest-only and principal-only strips
 - interest-rate risk
 - claims on, and claims guaranteed by, OECD central governments

If the terms and conditions of a particular instrument cause uncertainty as to how the instrument should be treated for capital purposes, it may be necessary to consult with Federal Reserve staff for a final determination. The Federal Reserve will, on a case-by-case basis, determine whether a capital instrument has characteristics that warrant its inclusion in tier 1 or tier 2 capital, as well as any quantitative limit on the amount of an instrument that will be counted as an element of tier 1 or tier 2 capital. In making this determination, the Federal Reserve will consider the similarity of the instrument to instruments explicitly treated in the guidelines, the ability of the instrument to absorb losses while the bank holding company operates as a going concern, the maturity and redemption features of the instrument, and other relevant terms and factors.

Redemptions of permanent equity or other capital instruments before their stated maturity could have a significant impact on a bank's overall capital structure. Consequently, a bank holding company considering such a step should consult with the Federal Reserve before redeeming any equity or debt capital instrument (before maturity) if its redemption could have a material effect on the level or composition of the organization's capital base.¹¹

4060.3.5.1 Investments in and Advances to Unconsolidated Banking and Finance Subsidiaries and Other Subsidiaries

Generally, debt and equity capital investments and any other instruments deemed to be capital in unconsolidated banking and finance subsidiaries¹² are to be deducted from the consolidated capital of the banking organizations, regardless of whether the investment is made by a parent bank holding company or its direct or indirect subsidiaries.¹³ Fifty percent of the investment is to be deducted from tier 1 capital and 50 percent from tier 2 capital. In cases where tier 2 capital is not sufficient to absorb the portion

11. Consultation would not ordinarily be necessary if an instrument were redeemed with the proceeds of, or replaced by, a like amount of a similar or higher-quality capital instrument and the organization's capital position is considered fully adequate by the Federal Reserve.

12. A banking and finance subsidiary generally is defined as any company engaged in banking or finance in which the parent institution directly or indirectly holds more than 50 percent of the outstanding voting stock, or which is otherwise controlled or capable of being controlled by the parent organization.

13. An exception to this deduction is to be made in the case of shares acquired in the regular course of securing or collecting a debt previously contracted in good faith.

(50 percent) of the investment allocated to it, the remainder (up to 100 percent) is to be deducted from tier 1 capital. In addition, capital investments in certain other subsidiaries that, while consolidated for accounting purposes, are not consolidated for certain supervisory or regulatory purposes, such as to facilitate functional regulation, are to be deducted from tier 1 and tier 2 capital of the banking organization in the same proportion as for unconsolidated banking and finance subsidiaries.

Advances to banking and finance subsidiaries (that is, loans, extensions of credit, guarantees, commitments, or any other credit exposures) not considered as capital are included in risk assets at the 100 percent risk weight (unless recognized collateral or guarantees dictate weighting at a lower percentage). However, such advances may be deducted from the parent banking organization's consolidated capital if the Federal Reserve finds that the risks associated with the advances are similar to the risks associated with capital investments, or if such advances possess risk factors that warrant an adjustment to capital for supervisory purposes. These risk factors could include the absence of collateral support or the clear intention of banking organizations to allow the advances, regardless of form, to serve as capital to subsidiaries.

The Board does not automatically deduct investments in other unconsolidated subsidiaries or investments in joint ventures and associated companies. Nonetheless, resources invested in these entities support assets that are not consolidated with the rest of the bank holding company and, therefore, may not be generally available to support additional leverage or absorb losses of affiliated institutions. Moreover, experience has shown that banking organizations often stand behind the losses of affiliated institutions in order to protect the reputation of the organization as a whole. In some cases, this support has led to losses that have exceeded the investments in these entities.

Accordingly, the level and nature of such investments should be closely monitored. For risk-based capital purposes, on a case-by-case basis, a bank holding company may be required to deduct such investments from total capital, to apply an appropriate risk-weighted capital charge against its pro rata share of the assets of the affiliated entity, to perform a required line-by-line consolidation of the entity, or to operate with a risk-based capital ratio above the minimum. In determining the appropriate capital treatment for such actions, the Board will generally take into account whether (1) the banking

organization has significant influence over the financial or managerial policies or operations of the affiliated entity, (2) the banking organization is the largest investor in the entity, or (3) other circumstances prevail (such as the existence of significant guarantees from the bank holding company) that appear to closely tie the activities of the affiliated company to the banking organization.

4060.3.5.1.1 Review and Monitoring of Intangible Assets

For bank holding companies, tier 1 capital is generally defined as the sum of core capital elements less goodwill and other intangible assets required to be deducted in accordance with section II.B.1.b. of the risk-based measure of the capital adequacy guidelines for BHCs. Certain intangible assets *are not required to be deducted* from capital.

4060.3.5.1.1.1 Certain Assets That May Be Included in Capital

All servicing assets, including servicing assets on assets other than mortgages (that is, nonmortgage-servicing assets), are deemed identifiable intangible assets. The only types of identifiable intangible assets that may be included in, that is, not deducted from, an organization's capital are readily marketable mortgage-servicing assets, nonmortgage-servicing assets, purchased credit-card relationships (PCCRs), and credit-enhancing I/Os. The total amount of these assets that are included in capital, in the aggregate, cannot exceed 100 percent of tier 1 capital. Nonmortgage-servicing assets and purchased credit-card relationships are subject to a separate sublimit of 25 percent of tier 1 capital. The total amount of credit-enhancing I/Os (both purchased and retained) that may be included in capital cannot exceed 25 percent of tier 1 capital.¹⁴ The total amount of credit-enhancing I/Os (both purchased and retained) that may be

14. Amounts of mortgage-servicing rights and purchased credit-card relationships in excess of these limitations, as well as all other identifiable intangible assets, including core deposit intangibles and favorable leaseholds, are to be deducted from an organization's core capital elements in determining tier 1 capital. Identifiable intangible assets, however, exclusive of mortgage-servicing assets and purchased credit-card relationships, acquired on or before February 19, 1992, generally *will not* be deducted from capital for supervisory purposes. They will, however, continue to be deducted for applications purposes.

included in capital cannot exceed 25 percent of tier 1 capital.

Purchased mortgage-servicing assets are identifiable intangible assets associated with the right to service mortgage loans. They usually arise when the rights are purchased from the entity that originated the mortgage loans. An organization that acquires purchased mortgage-servicing assets (PMSAs) has the obligation to collect principal and interest payments and escrow accounts from the mortgagor and to ensure that all amounts collected from the mortgagor are passed on to the appropriate parties. For performing these services, the servicer receives a fee, which is generally based on the remaining principal amount due on the mortgages being serviced.

Originated mortgage-servicing assets (OMSAs) generally represent the servicing rights acquired when an organization originates mortgage loans and subsequently sells the loans but retains the servicing rights. OMSAs are capitalized as balance-sheet assets in the same manner as PMSAs as a result of a Financial Accounting Standards Board decision, FAS 140, "Accounting for the Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." FAS 140 requires the right to service mortgage loans for others to be separately recognized as a servicing asset or liability, however the rights were acquired. Servicing becomes a distinct asset or liability only when it is contractually separated from the underlying assets by sale or securitization of the assets with servicing retained or by separate purchase or assumption of the servicing. See section 3070.0.6 for information on, and accounting for, mortgage-servicing assets.

Purchased credit-card relationships are identifiable intangible assets associated with the right to provide future advances and other services to credit card holders and to provide correspondent-merchant processing under credit card arrangements that have been originated by, and purchased from, another entity. PCCRs usually arise when a credit card portfolio is bought, and the purchaser acquires the current advances outstanding under the credit card arrangements, which are tangible assets, as well as the right to provide future services to the cardholders, which is an intangible asset. The value of PCCRs is derived from the anticipated profit the purchaser will earn from interest on future advances and from fees charged for other future credit card-related services, after covering expenses and other operating costs such as credit losses.

When calculating the limitations on mortgage-servicing assets, nonmortgage-servicing assets, purchased credit-card relationships, and credit-enhancing I/Os, the definition of tier 1 capital will be the sum of core capital elements, net of goodwill and net of all identifiable intangible assets and similar assets other than mortgage-servicing assets, nonmortgage-servicing assets, and purchased credit-card relationships, regardless of when they were acquired. (This calculation of tier 1 is before the deduction of any disallowed mortgage-servicing assets, any disallowed nonmortgage-servicing assets, any disallowed purchased credit-card relationships, any disallowed credit-enhancing I/Os (purchased or retained), and any disallowed deferred tax assets.)

4060.3.5.1.1.2 Valuation Review

Bank holding companies must review the book value of all intangible assets at least quarterly and make adjustments to these values as necessary. The fair market values of all intangible assets, nonmortgage-servicing assets, purchased credit-card relationships, and credit-enhancing I/Os also must be determined at least quarterly. This determination is to include adjustments for any significant changes made to the original valuation assumptions, including changes in prepayment estimates or account-attribution rates.

Examiners will review both the book value and the fair market value assigned to these assets, together with supporting documentation, during the inspection process. In addition, the Federal Reserve may require, on a case-by-case basis, an independent valuation of a BHC's intangible assets and credit-enhancing I/Os.

4060.3.5.1.1.3 Fair-Value and Book-Value Limits

The amount of mortgage-servicing rights, nonmortgage-servicing assets, and purchased credit-card relationships that a bank holding company may include in capital is limited to the lesser of 90 percent of their fair value (as determined according to the guidance herein), or 100 percent of their book value, as adjusted for capital purposes in accordance with the instructions to the Consolidated Financial Statements for Bank Holding Companies (FR Y-9C Report). If both the application of the limits on mortgage-servicing assets, nonmortgage-servicing assets, and purchased credit-card relationships and the adjustment of the balance-sheet amount for these assets would result in an amount being deducted from capital, the BHC would deduct only the

greater of the two amounts from its core capital elements in determining tier 1 capital.

The amount of credit-enhancing interest-only strips (I/Os) that a bank holding company may include in capital is their fair value. Such I/Os are on-balance-sheet assets that, in form or substance, represent the contractual right to receive some or all of the interest due on transferred assets. I/Os expose the bank holding company to credit risk directly or indirectly associated with transferred assets that exceeds a pro rata share of the bank holding company's claim on the assets, whether through subordination provisions or other credit-enhancement techniques. Such I/Os, whether purchased or retained, and including other similar "spread" assets, may be included in, that is, not deducted from, a bank holding company's capital subject to the fair value and tier 1 limitations. Both purchased and retained credit-enhancing I/Os, on a non-tax-adjusted basis, are included in the total amount that is used for purposes of determining whether a bank holding company exceeds the tier 1 limitation. In determining whether an I/O or other types of spread assets serve as a credit enhancement, the Federal Reserve will look to the economic substance of the transaction.

Bank holding companies may elect to deduct disallowed mortgage-servicing assets, any disallowed nonmortgage-servicing assets, and any disallowed credit-enhancing I/Os (purchased and retained) on a basis that is net of any associated deferred tax liability. Deferred tax liabilities netted in this manner cannot also be netted against deferred tax assets when determining the amount of deferred tax assets that are dependent upon future taxable income.

4060.3.5.1.1.4 Growing Organizations

Banking organizations experiencing substantial growth, whether internally or by acquisition, are expected to maintain strong capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets or credit-enhancing I/Os.

4060.3.5.1.1.5 Examiners' Review of Intangibles

During on-site examinations and inspections, examiners are to review the evidence of title to and the accounting for intangible assets, including their respective amortization schedules and supporting documentation. Carrying values of intangible assets and fair market values assigned

to these assets that are overstated or not adequately supported with documentation on how the carrying values were originated, amortized, or adjusted should be excluded from banking organizations' risk-based capital calculations. Intangible assets in excess of 25 percent of tier 1 capital should be closely scrutinized along with any unusual items and, if supervisory concerns warrant, deducted from tier 1 capital. An arrangement whereby a bank holding company enters into a licensing or leasing agreement or similar transaction to avoid booking an intangible asset should be subject to particularly close scrutiny. Normally, such arrangements will be dealt with by adjusting the bank holding company's capital calculation in an appropriate manner. In making their evaluation of intangible assets, examiners are to consider a number of factors, including—

1. the reliability and predictability of any cash flows associated with the asset and the degree of certainty that can be achieved in periodically determining the asset's useful life and value,
2. the existence of an active and liquid market for the asset, and
3. the feasibility of selling the asset apart from the banking organization or from the bulk of its assets.

Intangible rights that have been allowed to lapse or that are no longer used should be recommended for authorized write-off. Examiners should review intangible assets, such as mortgage-servicing rights, nonmortgage-servicing rights (for example, core deposit intangibles and leaseholds), and purchased credit-card relationships, and determine that the organization properly monitors their level and quality.

4060.3.5.1.2 Reciprocal Holdings of Banking Organizations' Capital Instruments

Reciprocal holdings (intentional cross-holdings) of banking organizations' capital instruments are to be deducted from the total capital of an organization for the purpose of determining the total risk-based capital ratio. Reciprocal holdings are cross-holdings resulting from formal or informal arrangements between banking organizations to swap or exchange each other's capital instruments. Deductions of holdings of capital

securities also would not be made in the case of interstate "stake-out" investments that comply with the Board's policy statement on nonvoting equity investments (12 C.F.R. 225.143). In addition, holdings of capital instruments issued by other banking organizations but taken in satisfaction of debts previously contracted would be exempt from any deduction from capital.

4060.3.5.1.3 *Limit on Deferred Tax Assets*

The amount of deferred tax assets that are dependent on future taxable income, net of the valuation allowance for deferred tax assets, that may be included in, that is, not deducted from, a bank holding company's capital may not exceed the lesser of—

1. the amount of these deferred tax assets that the bank holding company is expected to realize within one year of the calendar quarter-end, based on the projections of future taxable income for that year,¹⁵ or
2. 10 percent of tier 1 capital.

The reported amount of deferred tax assets, net of any valuation allowance for deferred tax assets, in excess of the lesser of these two amounts is to be deducted from a banking organization's core capital elements in determining tier 1 capital. For purposes of calculating the 10 percent limitation, tier 1 capital is defined as the sum of the core capital elements, net of goodwill and net of all identifiable intangible assets other than mortgage-servicing assets, nonmortgage-servicing assets, and purchased credit-card relationships, before the deduction of any disallowed mortgage-servicing assets, any disallowed nonmortgage-servicing assets,

15. To determine the amount of expected deferred tax assets realizable in the next 12 months, a banking organization should assume that all existing temporary differences fully reverse as of the report date. Projected future taxable income should not include net operating loss carry-forwards to be used during that year or the amount of existing temporary differences a bank holding company expects to reverse within the year. Such projections should include the estimated effect of tax-planning strategies that the organization expects to implement to realize net operating losses or tax-credit carry-forwards that would otherwise expire during the year. A new 12-month projection does not have to be prepared each quarter. Rather, on interim report dates, banking organizations may use the future-taxable-income projections for their current fiscal year, adjusted for any significant changes that have occurred or are expected to occur.

any disallowed purchased credit-card relationships, any disallowed credit-enhancing I/Os, any disallowed deferred tax assets, and any nonfinancial equity investments. There generally is no limit in tier 1 capital on the amount of deferred tax assets that can be realized from taxes paid in prior carry-back years and from future reversals of existing taxable temporary differences.

4060.3.5.1.4 *Nonfinancial Equity Investments*

A bank holding company must deduct from its core capital elements the sum of the appropriate percentages (as determined below) of the adjusted carrying value of all nonfinancial equity investments held by the parent bank holding company or by its direct or indirect subsidiaries. Investments held by a bank holding company include all investments held directly or indirectly by the bank holding company or any of its subsidiaries. The adjusted carrying value of investments is the aggregate value at which the investments are carried on the balance sheet of the consolidated bank holding company reduced by any unrealized gains on those investments that are reflected in such carrying value but excluded from the bank holding company's tier 1 capital and associated deferred tax liabilities. For example, for investments held as available-for-sale (AFS), the adjusted carrying value of the investments would be the aggregate carrying value of the investments (as reflected on the consolidated balance sheet of the bank holding company) *less* any unrealized gains on those investments that are included in other comprehensive income and not reflected in tier 1 capital, and associated deferred tax liabilities.¹⁶

A nonfinancial equity investment, subject to the risk-based capital rule (the rule), is any equity investment held by the bank holding company (1) under the merchant banking authority of section 4(k)(4)(H) of the Bank Holding Company Act (the BHC Act) and subpart J of the Board's Regulation Y (12 C.F.R. 225.175 et seq.); (2) under section 4(c)(6) or 4(c)(7) of the BHC Act in a nonfinancial company or in a company that makes investments in nonfinancial companies; (3) in a nonfinancial company through a small business investment company (SBIC) under section 302(b) of the Small Busi-

16. Unrealized gains on AFS investments may be included in supplementary capital to the extent permitted by the risk-based capital guidelines. In addition, the unrealized losses on AFS equity investments are deducted from tier 1 capital.

ness Investment Act of 1958;¹⁷ (4) in a nonfinancial company under the portfolio investment provisions of the Board's Regulation K (12 C.F.R. 211.8(c)(3)); or (5) in a nonfinancial company under section 24 of the Federal Deposit Insurance Act (other than section 24(f)).¹⁸

17. An equity investment made under section 302(b) of the Small Business Investment Act of 1958 in an SBIC that is not consolidated with the parent banking organization is treated as a nonfinancial equity investment.

18. See 12 U.S.C. 1843(c)(6), (c)(7), and (k)(4)(H); 15 U.S.C. 682(b); 12 C.F.R. 211.5(b)(1)(iii); and 12 U.S.C. 1831a. In a case in which the board of directors of the FDIC, acting directly in exceptional cases and after a review of the proposed activity, has permitted a lesser capital deduction for an investment approved by the board of directors under section 24 of the Federal Deposit Insurance Act, such deduction shall also apply to the consolidated bank holding company capital calculation so long as the bank's investments under

A nonfinancial company is an entity that engages in any activity that has not been determined to be financial in nature or incidental to financial activities under section 4(k) of the Bank Holding Company Act (12 U.S.C. 1843(k)).

The bank holding company must deduct from its core capital elements the sum of the appropriate percentages, as stated in table 1, of the adjusted carrying value of all nonfinancial equity investments held by the bank holding company. The amount of the percentage deduction increases as the aggregate amount of nonfinancial equity investments held by the bank holding company increases as a percentage of the bank holding company's tier 1 capital.

section 24 and SBIC investments represent, in the aggregate, less than 15 percent of the tier 1 capital of the bank.

Table 1—Deduction for Nonfinancial Equity Investments

<i>Aggregate adjusted carrying value of all nonfinancial equity investments held directly or indirectly by the bank holding company (as a percentage of the tier 1 capital of the parent banking organization)¹</i>	<i>Deduction from core capital elements (as a percentage of the adjusted carrying value of the investment)</i>
Less than 15 percent	8 percent
15 percent to 24.99 percent	12 percent
25 percent and above	25 percent

1. For purposes of calculating the adjusted carrying value of nonfinancial equity investments as a percentage of tier 1 capital, tier 1 capital is defined as the sum of core capital elements net of goodwill and net of all identifiable intangible assets other than MSAs, NMSAs, and PCCRs, but before

the deduction for any disallowed MSAs, any disallowed NMSAs, any disallowed PCCRs, any disallowed credit-enhancing I/Os (both purchased and retained), any disallowed deferred tax assets, and any nonfinancial equity investments.

These deductions are applied on a marginal basis to the portions of the adjusted carrying value of nonfinancial equity investments that fall within the specified ranges of the parent holding company's tier 1 capital. For example, if the adjusted carrying value of all nonfinancial equity investments held by a bank holding company equals 20 percent of the tier 1 capital of the bank holding company, then the amount of the deduction would be 8 percent of the adjusted carrying value of all investments up to 15 percent of the company's tier 1 capital, and 12 percent of the adjusted carrying value of all investments in excess of 15 percent of the company's tier 1 capital. The total adjusted carrying value of any nonfinancial equity investment that is subject to deduction is excluded from the bank holding company's risk-weighted assets for pur-

poses of computing the denominator of the company's risk-based capital ratio.¹⁹

The rule establishes minimum risk-based capital ratios, and banking organizations are at all times expected to maintain capital commensurate with the level and nature of the risks to which they are exposed. The risk to a banking organization from nonfinancial equity investments increases with its concentration in such investments, and strong capital levels above the minimum requirements are particularly important when a banking organization has a high degree of concentration in nonfinancial equity

19. For example, if 8 percent of the adjusted carrying value of a nonfinancial equity investment is deducted from tier 1 capital, the entire adjusted carrying value of the investment will be excluded from risk-weighted assets in calculating the denominator for the risk-based capital ratio.

investments (for example, in excess of 50 percent of tier 1 capital).

The Federal Reserve intends to monitor banking organizations and apply heightened supervision to equity investment activities as appropriate, including where the banking organization has a high degree of concentration in nonfinancial equity investments, to ensure that each organization maintains capital levels that are appropriate in light of its equity investment activities. The Federal Reserve also reserves authority to impose a higher capital charge in any case where the circumstances, such as the level of risk of the particular investment or portfolio of investments, the risk-management systems of the banking organization, or other information, indicate that a higher minimum capital requirement is appropriate.

4060.3.5.1.4.1 SBIC Investments

No deduction is required for nonfinancial equity investments that are held by a bank holding company through one or more SBICs that are consolidated with the bank holding company or in one or more SBICs that are not consolidated with the bank holding company to the extent that all such investments, in the aggregate, do not exceed 15 percent of the aggregate of the bank holding company's pro rata interests in the tier 1 capital of its subsidiary banks. Any nonfinancial equity investment that is held through or in an SBIC and not required to be deducted from tier 1 capital will be assigned a 100 percent risk weight and included in the parent holding company's consolidated risk-weighted assets.²⁰

20. If a bank holding company has an investment in an SBIC that is consolidated for accounting purposes but that is not wholly owned by the bank holding company, the adjusted carrying value of the bank holding company's nonfinancial equity investments through the SBIC is equal to the holding company's proportionate share of the adjusted carrying value of the SBIC's equity investments in nonfinancial companies. The remainder of the SBIC's adjusted carrying value (that is, the minority interest holders' proportionate share) is excluded from the risk-weighted assets of the bank holding company. If a bank holding company has an investment in an SBIC that is not consolidated for accounting purposes and has current information that identifies the percentage of the SBIC's assets that are equity investments in nonfinancial companies, the bank holding company may reduce the adjusted carrying value of its investment in the SBIC proportionately to reflect the percentage of the adjusted carrying value of the SBIC's assets that are not equity investments in nonfinancial companies. If a bank holding company reduces the adjusted carrying value of its investment in a nonconsolidated SBIC to reflect

To the extent the adjusted carrying value of all nonfinancial equity investments that a bank holding company holds through one or more SBICs that are consolidated with the bank holding company or in one or more SBICs that are not consolidated with the bank holding company exceeds, in the aggregate, 15 percent of the aggregate tier 1 capital of the company's subsidiary banks, the appropriate percentage of such amounts (as set forth in table 1) must be deducted from the bank holding company's core capital elements. In addition, the aggregate adjusted carrying value of *all* nonfinancial equity investments held through a consolidated SBIC and in a nonconsolidated SBIC (including any investments for which no deduction is required) must be included in determining, for purposes of table 1, the total amount of nonfinancial equity investments held by the bank holding company in relation to its tier 1 capital.

No deduction is required to be made with respect to the adjusted carrying value of any nonfinancial equity investment (or portion of such an investment) that was made by the bank holding company before March 13, 2000, or that was made after such date pursuant to a binding written commitment²¹ entered into by the bank holding company before March 13, 2000, provided that in either case the bank holding company has continuously held the investment since the relevant investment date.²² A nonfinancial equity investment made before March 13, 2000, includes any shares or other interests received by the bank holding company

financial investments of the SBIC, the amount of the adjustment will be risk weighted at 100 percent and included in the bank's risk-weighted assets.

21. A "binding written commitment" means a legally binding written agreement that requires the banking organization to acquire shares or other equity of the company, or make a capital contribution to the company, under terms and conditions set forth in the agreement. Options, warrants, and other agreements that give a banking organization the right to acquire equity or make an investment, but do not require the banking organization to take such actions, are not considered a binding written commitment.

22. For example, if a bank holding company made an equity investment in 100 shares of a nonfinancial company before March 13, 2000, that investment would not be subject to a deduction. However, if the bank holding company made any additional equity investment in the company after March 13, 2000, such as by purchasing additional shares of the company (including through the exercise of options or warrants acquired before or after March 13, 2000) or by making a capital contribution to the company, and such investment was not made pursuant to a binding written commitment entered into before March 13, 2000, the adjusted carrying value of the additional investment would be subject to a deduction. In addition, if the bank holding company sold and repurchased shares of the company after March 13, 2000, the adjusted carrying value of the reacquired shares would be subject to a deduction.

through a stock split or stock dividend on an investment made before March 13, 2000, provided the bank holding company provides no consideration for the shares or interests received and the transaction does not materially increase the bank holding company's proportional interest in the company. The exercise on or after March 13, 2000, of options or warrants acquired before March 13, 2000, is *not* considered to be an investment made before March 13, 2000, if the bank holding company provides any consideration for the shares or interests received upon exercise of the options or warrants. Any nonfinancial equity investment (or portion thereof) that is not required to be deducted from tier 1 capital must be included in determining the total amount of nonfinancial equity investments held by the bank holding company in relation to its tier 1 capital for purposes of table 1. In addition, any nonfinancial equity investment (or portion thereof) that is not required to be deducted from tier 1 capital will be assigned a 100 percent risk weight and included in the bank holding company's consolidated risk-weighted assets.

As discussed above for consolidated SBICs, some equity investments may be in companies that are consolidated for accounting purposes. For investments in a nonfinancial company that is consolidated for accounting purposes under generally accepted accounting principles, the parent banking organization's adjusted carrying value of the investment is determined under the equity method of accounting (net of any intangibles associated with the investment that are deducted from the consolidated bank holding company's core capital). Even though the assets of the nonfinancial company are consolidated for accounting purposes, these assets (as well as the credit-equivalent amounts of the company's off-balance-sheet items) should be excluded from the banking organization's risk-weighted assets for regulatory capital purposes.

4060.3.5.1.4.2 Equity Investments

The term "equity investment" means any equity instrument (including common stock, preferred stock, partnership interests, interests in limited-liability companies, trust certificates, and warrants and call options that give the holder the right to purchase an equity instrument), any equity feature of a debt instrument (such as a warrant or call option), and any debt instrument that is convertible into equity. An investment in any other instrument (including subordinated debt) may be treated as an equity investment if, in the judgment of the Federal Reserve, the

instrument is the functional equivalent of equity or exposes the banking organization to essentially the same risks as an equity instrument.

4060.3.5.1.5 Revaluation Reserves

Revaluation reserves reflect the formal balance-sheet restatement or revaluation for capital purposes of asset carrying values to reflect the current market values. The Federal Reserve generally has not included unrealized asset appreciation in capital-ratio calculations, although it has long taken such values into account as a separate factor in assessing the overall financial strength of a banking organization.

Consistent with long-standing supervisory practice, the excess of market values over book values for assets held by bank holding companies will generally not be recognized in supplementary capital or in the calculation of the risk-based capital ratio. However, all bank holding companies are encouraged to disclose their equivalent of premises (building) and security-revaluation reserves. The Federal Reserve will consider any appreciation, as well as any depreciation, in specific asset values as additional considerations in assessing overall capital strength and financial condition.

4060.3.5.2 Certain Balance-Sheet-Activity Considerations

4060.3.5.2.1 Investment in Shares of a Mutual Fund

An exception to the general rule exists for an investment in shares of a fund that invests in various securities or money market instruments that are eligible to be assigned to different risk categories. In this case, the total investment would generally be assigned to the risk category appropriate to the highest risk-weighted asset the fund may hold, in accordance with the stated limits set forth in the prospectus. Bank holding companies have the option of assigning the investment on a pro rata basis to different risk categories according to the investment limits in the fund's prospectus. Regardless of the risk-weighting method used, the total risk weight of a mutual fund must not be less than 20 percent. If the bank holding company chooses to assign a fund investment on a pro rata basis, and the sum of the investment limits for all asset categories,

as described in the fund's prospectus, exceeds 100 percent, it must assign risk weights in descending order based on the assumption that the fund invests the largest possible percentage of its assets in the highest risk-weighted categories.²³ If, in order to maintain a necessary degree of short-term liquidity, a fund is permitted to hold an insignificant amount of its assets in short-term, highly liquid securities of superior credit quality that do not qualify for a preferential risk weight, then those securities may be disregarded in determining the fund's risk weight.

The prudent use of hedging instruments by a fund to reduce the risk of its assets will not increase the risk weighting of the fund investment. For example, the use of hedging instruments by a fund to reduce the interest-rate risk of its government bond portfolio will not increase the risk weight of that fund above the 20 percent category. Nonetheless, if a fund engages in any activities that appear speculative in nature or the fund has any other characteristics that are inconsistent with the preferential risk weighting assigned to the fund's assets, holdings in the fund will be assigned to the 100 percent risk-weight category.

4060.3.5.2.2 *Loans Secured by First Liens on One- to Four-Family Residential Properties or Multifamily Residential Properties*

Qualifying one- to four-family residential properties, either owner-occupied or rented, or multifamily residential properties (as listed in the instructions to the bank holding company FR Y-9C Report), are accorded preferential risk-weighting treatment under the guidelines. These loans include loans to builders with substantial project equity for the construction of one- to four-family residential properties that have been presold under firm contracts to purchasers who have obtained firm commitments for permanent

qualifying mortgage loans and have made substantial earnest-money deposits.²⁴ Effective with an April 1, 1999, amendment, such loans to builders will be considered prudently underwritten only if the bank holding company has obtained sufficient documentation that the buyer of the home intends to purchase the home (that is, has a legally binding written sales contract). The buyer must have the ability to obtain a mortgage sufficient to purchase the home (that is, has a firm written commitment for permanent financing of the home upon completion).

To ensure that only qualifying residential mortgage loans are assigned to the 50 percent risk-weight category, examiners are to review the real estate loans that are included in that category. Such loans are not eligible for preferential treatment unless the loans are made subject to prudent credit-underwriting standards; the loan-to-value ratios are conservative;²⁵ the loan-to-value ratios²⁶ are based on the most current appraisal or evaluation²⁷ of the properties, with such appraisal or evaluation conforming to both the Board's real estate appraisal regulations and guidelines and the banking organization's internal appraisal guidelines; and the loans are performing in accordance with their original terms and are not 90 days or more past due or carried in nonaccrual status. Where examiners find that some residential mortgage loans do not meet all the specified criteria or are made for the purpose of speculative real estate development, such loans should be assigned to

24. An amendment, effective December 29, 1992, lowered from 100 percent to 50 percent the risk weight on loans to finance the construction of one- to four-family residences that have been presold.

25. Prudent underwriting standards dictate that a loan-to-value ratio used in the case of originating a loan to acquire a property would not be deemed conservative unless the value is based on the lower of the acquisition cost of the property or the appraised (or, if appropriate, evaluated) value. Otherwise, the loan-to-value ratio generally would be based on the value of the property as determined by the most current appraisal or, if appropriate, the most current evaluation. All appraisals and evaluations must be made in a manner consistent with the federal banking agencies' real estate appraisal regulations and guidelines and with the banking organization's own appraisal guidelines.

26. If a banking organization holds the first and junior lien(s) on a residential property and no other party holds an intervening lien, the transaction is treated as a single loan secured by a first lien for the purposes of determining the loan-to-value ratio and assigning a risk weight.

27. Appraisals made at the inception of one- to four-family residential property loans are to be used in calculating loan-to-value ratios. Subsequent appraisals showing increased property values may be used to support higher loan-to-value ratios. However, to avoid penalizing banking organizations doing business in markets with declining real estate values, appraisals of residential properties as conducted at inception are to be used in calculating loan-to-value ratios, even though more current appraisals showing decreases in values are available.

23. For example, assume that a fund's prospectus permits up to 30 percent of the fund's assets to be invested in 100 percent risk-weighted assets, up to 40 percent of the fund's assets to be invested in 50 percent risk-weighted assets, and up to 60 percent of the fund's assets to be invested in 20 percent risk-weighted assets. In such a case, the bank holding company must assign 30 percent of the total investment to the 100 percent risk category, 40 percent to the 50 percent risk category, and 30 percent to the 20 percent risk category. It may not minimize its capital requirement by assigning 60 percent of the total investment to the 20 percent risk category and 40 percent to the 50 percent risk category.

the 100 percent risk-weight category in accordance with the guidelines.

Examiners should keep in mind that loans secured by multifamily residential property must meet additional criteria to be included in the 50 percent risk-weight category. These include the requirement that all principal and interest payments on the loan must have been made on time for at least the year preceding the placement of the loan in this risk-weight category. If the existing property owner is refinancing a loan on that property, all principal and interest payments on the loan being refinanced must have been made on time for at least the year preceding placement in this risk-weight category. In addition, amortization of the principal and interest must occur over a period of not more than 30 years, and the minimum original maturity for repayment of principal must not be less than seven years. Also, the annual net operating income (before debt service) generated by the property during its most recent fiscal year must not be less than 120 percent of the loan's current annual debt service (115 percent if the loan is based on a floating interest rate) or, in the case of a cooperative or other not-for-profit housing project, the property must generate sufficient cash flow to provide comparable protection to the institution.

If examiners find material evidence of residential mortgage loans having questionable eligibility for preferential risk weighting but cannot readily identify the amounts that were inappropriately weighted, the overall evaluation of the banking organization's capital adequacy should reflect a higher capital requirement than otherwise would be the case.

4060.3.5.3 Certain Off-Balance-Sheet-Activity Considerations

Off-balance-sheet transactions include recourse obligations and direct-credit substitutes. The treatment for direct-credit substitutes, assets transferred with recourse, and securities issued in connection with asset securitizations and structured financings is described below. The terms "asset securitizations" or "securitizations," as used in this subsection, include structured financings as well as asset-securitization transactions. Securitization is the pooling and repackaging by a special-purpose entity of assets or other credit exposures into securities that can be sold to investors. Securitization includes transactions that create stratified credit-risk positions whose performance is dependent on an under-

lying pool of credit exposures, including loans and commitments.

4060.3.5.3.1 Assets Sold with Recourse

For risk-based capital adequacy purposes, "recourse" means a bank holding company's retention, in form or in substance, of any credit risk directly or indirectly associated with an asset it has transferred that exceeds a pro rata share of the bank holding company's claim on the asset. If a bank holding company has no claim on a transferred asset, then the retention of any risk of credit loss is recourse. A recourse obligation typically arises when a bank holding company transfers assets and retains an explicit obligation to repurchase the assets or absorb losses due to a default on the payment of principal or interest or any other deficiency in the performance of the underlying obligor or some other party.

Recourse may also exist implicitly if a bank holding company provides credit enhancement beyond any contractual obligation to support assets it has sold. The following are examples of recourse arrangements:

1. credit-enhancing representations and warranties made on the transferred assets
2. loan-servicing assets retained pursuant to an agreement under which the bank holding company will be responsible for credit losses associated with the loans being serviced (Mortgage-servicer cash advances that meet the conditions of section III.B.3.a.x. of the guidelines (12 C.F.R. 225, appendix A) are not recourse arrangements.)
3. retained subordinated interests that absorb more than their pro rata share of losses from the underlying assets
4. assets sold under an agreement to repurchase, if the assets are not already included on the balance sheet
5. loan strips sold without contractual recourse, when the maturity of the transferred loan is shorter than the maturity of the commitment under which the loan is drawn
6. credit derivatives issued that absorb more than the bank holding company's pro rata share of losses from the transferred assets
7. clean-up calls at inception that are greater than 10 percent of the balance of the original pool of transferred loans or of the outstanding principal amount of securities (Clean-up

calls that are 10 percent or less of the original pool balance that are exercisable at the option of the bank holding company are not recourse arrangements.)

8. liquidity facilities that provide liquidity support to ABCP (other than eligible ABCP liquidity facilities).

To qualify as an asset sale with recourse, a transfer of assets must first qualify as a sale according to the GAAP criteria set forth in paragraph 14 of the Financial Accounting Standards Board's Statement No. 140 (FAS 140), "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." If a transfer of assets does not meet these criteria, the assets must remain on the bank holding company's balance sheet and thus they are subject to the appropriate risk-based capital charge.

If a transfer of assets qualifies as a sale under GAAP but the bank holding company retains any risk of loss or obligation for payment of principal or interest, then the transfer is considered to be a sale with recourse. A more detailed definition of an asset sale with recourse may be found in the "Summary Description of the Risk-Based Capital Treatment of Recourse Arrangements" in the glossary to the Consolidated Financial Statements for Bank Holding Companies, the FR Y-9C Report instructions. Although the assets are removed from a bank holding company's balance sheet in an asset sale with recourse, the credit-equivalent amount is assigned to the risk category appropriate to the obligor in the underlying transaction, after considering any associated guaranties or the nature of the collateral. This assignment also applies when the contractual terms of the recourse agreement limit the seller's risk to a percentage of the value of the assets sold or to a specific dollar amount.

If, however, the risk retained by the seller is limited to some fixed percentage of any losses that might be incurred and there are no other provisions resulting in the direct or indirect retention of risk by the seller, the maximum amount of possible loss for which the selling bank holding company is at risk (the stated percentage times the amount of assets to which the percentage applies) is subject to risk-based capital requirements. The remaining amount of assets transferred would be treated as a sale that is not subject to the risk-based capital require-

ments. For example, a seller would treat a sale of \$1 million in assets with a recourse provision that the seller and buyer proportionately share in losses incurred on a 10 percent and 90 percent basis, respectively, and with no other retention of risk by the seller, as a \$100,000 asset sale with recourse and as a \$900,000 sale not subject to risk-based capital requirements.

There are exceptions to the general reporting rule for recourse transactions. The first exception applies to recourse transactions for which the amount of recourse the bank holding company is contractually liable for is less than the capital requirement for the assets transferred under the recourse agreement. For such transactions, a bank holding company must hold capital equal to its maximum contractual recourse obligation. For example, assume that a bank holding company transfers a \$100 pool of commercial loans and retains a recourse obligation of 2 percent. Ordinarily, it would be subject to an 8 percent capital charge, or \$8. Because the recourse obligation is only 2 percent, however, the bank holding company would be required to hold capital of \$2 against the recourse exposure. This capital charge may be reduced further by the balance of any associated noncapital GAAP recourse liability account.

A second exception to the general rule applies to the transfer of small-business loans and to the transfer of leases on personal property with recourse. A bank holding company should include in risk-weighted assets only the amount of retained recourse—instead of the entire amount of assets transferred—in connection with a transfer of small-business loans or a transfer of leases on personal property with recourse, provided two conditions are met. First, the transaction must be treated as a sale under GAAP; second, the bank holding company must establish a non-capital reserve that is sufficient to cover its estimated liability under the recourse arrangement. The total outstanding amount of recourse retained under such transactions may not exceed 15 percent of a BHC's total risk-based capital without Board approval.

4060.3.5.3.2 Definitions

The capital adequacy guidelines provide special treatment for recourse obligations, direct-credit substitutes, residual interests, and asset- and mortgage-backed securities involved in asset-securitization activities. A brief discussion of some of the other primary definitions follows.

4060.3.5.3.2.1 Direct-Credit Substitutes

The term “direct-credit substitute” refers to an arrangement in which a bank holding company assumes, in form or in substance, credit risk associated with an on- or off-balance-sheet asset or exposure that was not previously owned by the bank holding company (third-party asset), and the risk assumed by the bank holding company exceeds the pro rata share of its interest in the third-party asset. If the bank holding company has no claim on the third-party asset, then the bank holding company’s assumption of any credit risk on the third-party asset is a direct-credit substitute.

The term “direct-credit substitute” explicitly includes items such as purchased subordinated interests, agreements to cover credit losses that arise from purchased loan-servicing rights, credit derivatives, and lines of credit that provide credit enhancement. Some purchased subordinated interests, such as credit-enhancing I/O strips, are also residual interests for regulatory capital purposes.

Direct-credit substitutes include, but are not limited to—

1. financial standby letters of credit that support financial claims on a third party that exceed a bank holding company’s pro rata share of losses in the financial claim;
2. guarantees, surety arrangements, credit derivatives, and similar instruments backing financial claims that exceed a bank holding company’s pro rata share in the financial claim;
3. purchased subordinated interests or securities that absorb more than their pro rata share of losses from the underlying assets;
4. credit-derivative contracts under which the bank holding company assumes more than its pro rata share of credit risk on a third-party exposure;
5. loans or lines of credit that provide credit enhancement for the financial obligations of an account party;
6. purchased loan-servicing assets if the servicer is responsible for credit losses or if the servicer makes or assumes credit-enhancing representations and warranties with respect to the loans serviced (mortgage-servicer cash advances that meet the conditions of section III.B.3.a.viii. of the guidelines (12 C.F.R. 225, appendix A) are not direct-credit substitutes);
7. clean-up calls on third-party assets (clean-up calls that are 10 percent or less of the original pool balance that are exercisable at the

- option of the bank holding company are not direct-credit substitutes); and
8. liquidity facilities that provide liquidity support to ABCP (other than eligible ABCP liquidity facilities).

4060.3.5.3.2.2 Residual Interests

Residual interests are defined as any on-balance-sheet asset (1) that represents an interest (including a beneficial interest) created by a transfer that qualifies as a sale (in accordance with GAAP) of a financial asset,²⁸ whether through a securitization or otherwise, and (2) that exposes the bank holding company to credit risk directly or indirectly associated with the transferred assets that exceeds a pro rata share of the bank holding company’s claim on the assets, whether through subordination provisions or other credit-enhancement techniques. Examples of residual interests (assets) include credit-enhancing I/O strips; spread accounts; cash-collateral accounts; retained subordinated interests; other forms of overcollateralization; and similar on-balance-sheet assets that function as a credit enhancement. Residual interests also include those exposures that, in substance, cause the bank holding company to retain the credit risk of an asset or exposure that had qualified as a residual interest before it was sold.

The functional-based definition reflects the fact that securitization structures vary in the way they use certain assets as credit enhancements. Residual interests therefore include any retained on-balance-sheet asset that functions as a credit enhancement in a securitization, regardless of how a bank holding company refers to the asset in financial or regulatory reports. Residual interests generally do not include interests purchased from a third party, except for credit-enhancing I/Os.

In general, the definition of residual interests includes only an on-balance-sheet asset that represents an interest created by a transfer of financial assets treated as a sale under GAAP, in accordance with FAS 140. Interests retained in a securitization or transfer of assets accounted for as a financing under GAAP are generally excluded from the definition of residual interest. In the

28. “Financial asset” means cash or other monetary instrument, an evidence of debt, an evidence of an ownership interest in an entity, or a contract that conveys a right to receive or exchange cash or another financial instrument from another party.

case of GAAP financings, the transferred assets remain on the transferring bank holding company's balance sheet and are, therefore, directly included in both the leverage and risk-based capital calculations. Further, when a transaction is treated as a financing, no gain is recognized from an accounting standpoint.

Sellers' interests generally do not function as a credit enhancement. Thus, if a seller's interest shares losses on a pro rata basis with investors, such an interest would not be considered a residual interest. However, bank holding companies should recognize that sellers' interests that are structured to absorb a disproportionate share of losses will be considered residual interests.

The definition of residual interest also includes overcollateralization and spread accounts because these accounts are susceptible to the potential future credit losses within the loan pools that they support, and thus are subject to valuation inaccuracies. Spread accounts and overcollateralizations that do not meet the definition of credit-enhancing I/O strips generally do not expose a bank holding company to the same level of risk as credit-enhancing I/O strips, and thus are excluded from the concentration limit.

The capital treatment for a residual interest applies when a bank holding company effectively retains the risk associated with that residual interest, even if the residual is sold. The economic substance of the transaction will be used to determine whether the bank holding company has transferred the risk associated with the residual-interest exposure. Bank holding companies that transfer the risk on residual interests, either directly through a sale or indirectly through guarantees or other credit-risk-mitigation techniques, and then reassume this risk in any form will be required to hold risk-based capital as though the residual interest remained on its books. For example, if a bank holding company sells an asset that is an on-balance-sheet credit enhancement to a third party and then writes a credit derivative to cover the credit risk associated with that asset, the selling bank holding company must continue to risk-weight, and hold capital against, that asset as a residual interest as if the asset had not been sold.

4060.3.5.3.2.3 Spread Accounts That Function as Credit-Enhancing Interest-Only Strips

A spread account is an on-balance-sheet asset that functions as a credit enhancement and that

can represent an interest in expected interest and fee cash flows derived from assets an organization has sold into a securitization. In those cases, the spread account is considered to be a "credit-enhancing interest-only strip" and is subject to the concentration limit. (See SR-02-16.) However, any portion of a spread account that represents an interest in cash that has already been collected and is held by the trustee is a "residual interest" subject to dollar-for-dollar capital, but it is not a credit-enhancing interest-only strip subject to the concentration limit. For example, assume that a bank holding company books a single spread-account asset that is derived from two separate cash-flow streams:

1. *A receivable from the securitization trust that represents cash that has already accumulated in the spread account.* In accordance with the securitization documents, the cash will be returned to the bank holding company at some date in the future after having been reduced by amounts used to reimburse investors for credit losses. Based on the date when the cash is expected to be paid out to the bank holding company, the present value of this asset is currently estimated to be \$3.
2. *A projection of future cash flows that are expected to accumulate in the spread account.* In accordance with the securitization documents, the cash, to the extent collected, will also be returned to the bank holding company at some date in the future after having been reduced by amounts used to reimburse investors for credit losses. Based on the date when the cash is expected to be paid out to the bank holding company, the present value of this asset is currently estimated to be \$2.

Both components of the spread account are considered to be residual interests under the current capital standards because both represent on-balance-sheet assets subject to more than their pro rata share of losses on the underlying portfolio of sold assets. However, the \$2 asset that represents the banking holding company's retained interest in future cash flows exposes the organization to a greater degree of risk because the \$2 asset presents additional uncertainty as to whether it will ever be collected. This additional uncertainty associated with the recognition of future subordinated excess cash flows results in the \$2 asset being treated as a credit-enhancing interest-only strip, a subset of residual interests.

The face amount²⁹ of all of the banking hold-

29. "Face amount" means the notional principal, or face

ing company's credit-enhancing interest-only strips is first subject to a 25 percent of tier 1 capital concentration limit. Any portion of this face amount that exceeds 25 percent of tier 1 capital is deducted from tier 1 capital. This limit will affect both a bank holding company's risk-based and leverage capital ratios. The remaining face amount of the bank holding company's credit-enhancing interest-only strips, as well as the face amount of the spread-account receivable for cash already held in the trust, is subject to the dollar-for-dollar capital requirement established for residual interests, which affects only the risk-based capital ratios.

4060.3.5.3.2.4 Credit-Enhancing Interest-Only Strips

A credit-enhancing interest-only (I/O) strip is an on-balance-sheet asset that, in form or substance, (1) represents the contractual right to receive some or all of the interest due on transferred assets and (2) exposes the bank holding company to credit risk that exceeds its pro rata claim on the underlying assets, whether through subordination provisions or other credit-enhancing techniques. Thus, credit-enhancing I/O strips include any balance-sheet asset that represents the contractual right to receive some or all of the remaining interest cash flow generated from assets that have been transferred into a trust (or other special-purpose entity), after taking into account trustee and other administrative expenses, interest payments to investors, servicing fees, and reimbursements to investors for losses attributable to the beneficial interests they hold, as well as reinvestment income and ancillary revenues³⁰ on the transferred assets.

Credit-enhancing I/O strips are generally carried on the balance sheet at the present value of the expected net cash flow that the banking organization reasonably expects to receive in future periods on the assets it has securitized, adjusted for some level of prepayments if relevant to that asset class, and discounted at an appropriate market interest rate. Typically, when assets are transferred in a securitization transaction that is accounted for as a sale under GAAP, the accounting recognition given to the credit-enhancing I/O strip on the seller's balance sheet results in the recording of a gain on the portion of the transferred assets that has been sold. This

gain is recognized as income, thus increasing the bank holding company's capital position. The economic substance of a transaction will be used to determine whether a particular interest cash flow functions as a credit-enhancing I/O strip, and the Federal Reserve reserves the right to identify other cash flows or spread-related assets as credit-enhancing I/O strips on a case-by-case basis. For example, including some principal payments with interest and fee cash flows will not otherwise negate the regulatory capital treatment of that asset as a credit-enhancing I/O strip. Credit-enhancing I/O strips include both purchased and retained interest-only strips that serve in a credit-enhancing capacity, even though purchased I/O strips generally do not result in the creation of capital on the purchaser's balance sheet.

4060.3.5.3.2.5 Credit Derivatives

Credit derivative means a contract that allows one party (the protection purchaser) to transfer the credit risk of an asset or off-balance-sheet credit exposure to another party (the protection provider). The value of a credit derivative is dependent, at least in part, on the credit performance of a "reference asset."

4060.3.5.3.2.6 Credit-Enhancing Representations and Warranties

When a bank holding company transfers assets, including servicing rights, it customarily makes representations and warranties concerning those assets. When a bank holding company purchases loan-servicing rights, it may also assume representations and warranties made by the seller or a prior servicer. These representations and warranties give certain rights to other parties and impose obligations on the seller or servicer of the assets. To the extent a bank holding company's representations and warranties function as credit enhancements to protect asset purchasers or investors from credit risk, they are considered as recourse or direct-credit substitutes.

Banks and bank holding companies typically make a number of factual warranties that are unrelated to the ongoing performance or credit quality of transferred assets. These warranties entail operational risk, as opposed to the open-ended credit risk inherent in a financial guar-

value, amount of an off-balance-sheet item; the amortized cost of an asset not held for trading purposes; and the fair value of a trading asset.

30. According to FAS 140, ancillary revenues include such revenues as late charges on the transferred assets.

anty, and are not considered recourse or a direct-credit substitute. Warranties that create operational risk include warranties that assets have been underwritten or collateral appraised in conformity with identified standards, as well as warranties that provide for the return of assets in instances of incomplete documentation, fraud, or misrepresentation.

Warranties can impose varying degrees of operational risk. For example, a warranty that asset collateral has not suffered damage from potential hazards entails a risk that is offset to some extent by prudent underwriting practices requiring the borrower to provide hazard insurance to the bank holding company. A warranty that asset collateral is free of environmental hazards may present acceptable operational risk for certain types of properties that have been subject to environmental assessment, depending on the circumstances. The appropriate limits for these operational risks are monitored through supervision of a bank holding company's loan-underwriting, -sale, and -servicing practices. Also, a bank holding company that provides warranties to loan purchasers and investors must include associated operational risks in its risk management of exposures arising from loan-sale or securitization-related activities. Bank holding companies should be prepared to demonstrate to examiners that operational risks are effectively managed.

Recourse or direct-credit-substitute treatment is required for warranties providing assurances about the actual value of asset collateral, including that the market value corresponds to its appraised value or that the appraised value will be realized in the event of foreclosure and sale. Warranties such as these, which make representations about the future value of a loan or related collateral, constitute an enhancement of the loan transferred, and thus are recourse arrangements or direct-credit substitutes. When a seller represents that it "has no knowledge" of circumstances that could cause a loan to be other than investment quality, the representation is not recourse. Bank holding companies may limit recourse exposure with warranties that directly address the condition of the asset at the time of transfer (that is, creation of an operational warranty) and by monitoring compliance with stated underwriting standards. Alternatively, bank holding companies might create warranties with exposure caps that would permit them to take advantage of the low-level-recourse rule.

The definition of credit-enhancing representa-

tions and warranties excludes warranties, such as early-default clauses and similar warranties. Early-default clauses typically give the purchaser of a loan the right to return the loan to the seller if the loan becomes 30 or more days delinquent within a stated period after the transfer, for example, four months after transfer. Early-default clauses can allow for a reasonable, but limited, period of time to review file documentation. Once the stated period has expired, the early-default clause will no longer trigger recourse treatment, provided there are no other provisions that constitute recourse.

Early-default clauses and warranties are excluded from the definition of representations and warranties if the clauses or warranties permit the return of or, in the case of premium-refund clauses, cover one- to four-family residential first mortgage loans that qualify for a 50 percent risk weight for a maximum period of 120 days from the date of transfer. These warranties must cover only loans that were originated within one year of the date of transfer.

A premium-refund clause is a warranty that obligates a seller who has sold a loan at a price in excess of par, that is, at a premium, to refund the premium, either in whole or in part, if the loan defaults or is prepaid within a certain period of time. Premium-refund clauses that cover assets guaranteed, in whole or in part, by the U.S. government, a U.S. government agency, or a government-sponsored enterprise are not included in the definition of credit-enhancing representations and warranties, provided the premium-refund clauses are for a period not to exceed 120 days from the date of transfer. The definition also does not include warranties that permit the return of assets in instances of misrepresentation, fraud, or incomplete documentation.

4060.3.5.3.2.7 Clean-Up Calls

A clean-up call is an option that permits a servicer or its affiliate (which may be the originator) to take investors out of their positions in a securitization before all of the transferred loans have been repaid. The servicer accomplishes this by repurchasing the remaining loans in the pool once the pool balance has fallen below some specified level. This option in a securitization raises long-standing agency concerns that a bank holding company may implicitly assume a credit-enhancing position by exercising the option when the credit quality of the securitized loans is deteriorating. An excessively large clean-up call facilitates a securitization servicer's ability to take investors out of a pool to protect them

from absorbing credit losses, and thus may indicate that the servicer has retained or assumed the credit risk on the underlying pool of loans.

Generally, clean-up calls (whether or not they are exercised) are treated as recourse and direct-credit substitutes. The purpose of treating large clean-up calls as recourse or direct-credit substitutes is to ensure that bank holding companies are not able to provide credit to the trust investors by repaying their investment when the credit quality of the pool is deteriorating without holding capital against the exposure. The focus should be on the arrangement itself and not the exercise of the call. Thus, the existence, not the exercise, of a clean-up call that does not meet the requirements of the risk-based capital rule will trigger treatment as a recourse obligation or a direct-credit substitute. A clean-up call can function as a credit enhancement because its existence provides the opportunity for a bank holding company (as servicer or an affiliate of a servicer) to provide credit support to investors by taking an action that is within the contractual terms of the securitization documents. Because clean-up calls can also serve an administrative function in the operation of a securitization, a limited exemption therefore exists for these options.

When an agreement permits a bank holding company that is a servicer or an affiliate of the servicer to elect to purchase loans in a pool, the agreement is not considered a recourse obligation or a direct-credit substitute if the agreement permits the banking organization to purchase the remaining loans in a pool when the balance of those loans is equal to or less than 10 percent of the original pool balance. This treatment will also apply to clean-up calls written with reference to less than 10 percent of the outstanding principal amount of securities. If, however, an agreement permits the remaining loans to be repurchased when their balance is greater than 10 percent of the original pool balance, the agreement is considered to be a direct-credit substitute. The exemption from direct-credit-substitute treatment for a clean-up call of 10 percent or less recognizes the real market need to be able to call a transaction when the costs of keeping it outstanding are burdensome. However, to minimize the potential for using such a feature as a means of providing support for a troubled portfolio, a bank holding company that exercises a clean-up call should not repurchase any loans in the pool that are 30 days or more past due. Alternatively, the bank holding company should repurchase the loans at the lower of their estimated fair value or their par value plus accrued interest.

Bank holding companies that repurchase assets pursuant to a clean-up call may do so based on an aggregate fair value for all repurchased assets. Bank holding companies do not have to evaluate each individual loan remaining in the pool at the time a clean-up call is exercised to determine fair value. Rather, the overall repurchase price should reflect the aggregate fair value of the assets being repurchased so that the bank holding company is not overpaying for the assets and, in so doing, providing credit support to the trust investors.

Examiners will review the terms and conditions relating to the repurchase arrangements in clean-up calls to ensure that transactions are done at the lower of fair value or par value plus accrued interest. Bank holding companies should be able to support their fair-value estimates. If the Federal Reserve concludes that a bank holding company has repurchased assets at a price that exceeds the lower of these two amounts, the clean-up call provisions in its future securitizations may be treated as recourse obligations or direct-credit substitutes. Regardless of the size of the clean-up call, the Federal Reserve will closely scrutinize and take appropriate supervisory action for any transaction in which the bank holding company repurchases deteriorating assets for an amount greater than a reasonable estimate of their fair value.

4060.3.5.3.2.8 Financial Standby Letters of Credit

A financial standby letter of credit means a letter of credit or similar arrangement that represents an irrevocable obligation to a third-party beneficiary—

1. to repay money borrowed by, advanced to, or for the account of a second party (the account party), or
2. to make payment on behalf of the account party, in the event that the account party fails to fulfill its obligation to the beneficiary.

4060.3.5.3.2.9 Loan-Servicing Arrangements

The definitions of recourse and direct-credit substitute cover loan-servicing arrangements if the bank holding company, as servicer, is responsible for credit losses associated with the serviced loans. However, cash advances made

by residential mortgage servicers to ensure an uninterrupted flow of payments to investors or the timely collection of the mortgage loans are specifically excluded from the definitions of recourse and direct-credit substitute, provided the residential mortgage servicer is entitled to reimbursement for any significant advances and this reimbursement is not subordinate to other claims. To be excluded from recourse and direct-credit-substitute treatment, the bank holding company, as servicer, should make an independent credit assessment of the likelihood of repayment of the servicer advance before advancing funds, and should only make such an advance if prudent lending standards are met. Risk-based capital is assessed only against the amount of the cash advance, and the advance is assigned to the risk-weight category appropriate to the party obligated to reimburse the servicer.

If a residential mortgage servicer is not entitled to full reimbursement, then the maximum possible amount of any nonreimbursed advances on any one loan must be contractually limited to an insignificant amount of the outstanding principal on that loan. Otherwise, the servicer's obligation to make cash advances will not be excluded from the definitions of recourse and direct-credit substitute. Bank holding companies that act as servicers should establish policies on servicer advances and use discretion in determining what constitutes an "insignificant" servicer advance. The Federal Reserve will exercise its supervisory authority to apply recourse or direct-credit-substitute treatment to servicer cash advances that expose a bank holding company, acting as servicer, to excessive levels of credit risk.

4060.3.5.3.2.10 Liquidity Facility

A liquidity facility refers to a legally binding commitment to provide liquidity support to ABCP by lending to, or purchasing assets from, any structure, program, or conduit in the event that funds are required to repay maturing ABCP.

4060.3.5.3.2.11 Mortgage-Servicer Cash Advance

A mortgage-servicer cash advance represents funds that a residential mortgage loan servicer advances to ensure an uninterrupted flow of payments, including advances made to cover foreclosure costs or other expenses to facilitate

the timely collection of the loan. A mortgage-servicer cash advance is not a recourse obligation or a direct-credit substitute if—

1. the servicer is entitled to full reimbursement and this right is not subordinated to other claims on the cash flows from the underlying asset pool, or
2. for any one loan, the servicer's obligation to make nonreimbursable advances is contractually limited to an insignificant amount of the outstanding principal balance of that loan.

4060.3.5.3.3 *Recourse Obligations, Direct-Credit Substitutes, Residual Interests, and Asset- and Mortgage-Backed Securities*

The risk-based capital treatment for recourse obligations, direct-credit substitutes, residual interests, and asset- and mortgage-backed securities in connection with asset securitizations and structured financings is described below. The capital treatment described in this subsection applies to the bank holding company's own positions.³¹ For bank holding companies that comply with the market-risk rules, except for liquidity facilities supporting ABCP (in form or in substance), positions in the trading book that arise from asset securitizations, including recourse obligations, residual interests, and direct-credit substitutes, should be treated according to the market-risk rules. However, these bank holding companies remain subject to the 25 percent concentration limit for credit-enhancing I/O strips.

4060.3.5.3.3.1 Credit-Equivalent Amount

The credit-equivalent amount for a recourse obligation or a direct-credit substitute is the full amount of the credit-enhanced assets for which the bank holding company directly or indirectly retains or assumes credit risk, multiplied by a 100 percent conversion factor. This treatment, however, does not apply to externally rated positions (an instrument or obligation that has received a credit rating from a nationally recognized statistical rating organization), senior positions not externally rated, residual interests, certain internally rated positions, and certain small-business loans and leases on personal property transferred with recourse.

³¹ The treatment also applies to BHCs that hold positions in their trading book, but that are not otherwise subject to the market-risk rules.

4060.3.5.3.3.2 Risk-Weight Factor for Off-Balance-Sheet Recourse Obligations and Direct-Credit Substitutes

To determine the bank holding company's risk-weight factor for off-balance-sheet recourse obligations and direct-credit substitutes, the credit-equivalent amount is assigned to the risk category appropriate to the obligor in the underlying transaction, after considering any associated guarantees or collateral. For a direct-credit substitute that is an on-balance-sheet asset (for example, a purchased subordinated security), a bank holding company must calculate risk-weighted assets using the amount of the direct-credit substitute and the full amount of the assets it supports, that is, all the more senior positions in the structure. Direct-credit substitutes that have been syndicated or in which risk participations³² have been conveyed or acquired are considered off-balance-sheet items that are converted at a 100 percent conversion factor. (See section III.D.1. of the guidelines (12 C.F.R. 225, appendix A) for more capital treatment details.)

4060.3.5.3.4 Ratings-Based Approach—Externally Rated Positions

Each loss position in an asset-securitization structure functions as a credit enhancement for the more senior loss positions in the structure. A multilevel, ratings-based approach is used to assess capital requirements on recourse obligations, residual interests (except credit-enhancing I/O strips), direct-credit substitutes, and senior and subordinated securities in asset securitizations. The approach uses credit ratings from the rating agencies to measure relative exposure to credit risk and determine the associated risk-based capital requirement. Using these credit ratings provides a way to use determinations of credit quality that are relied on by investors and other market participants to differentiate the regulatory capital treatment for loss positions representing different gradations of risk.

Under the ratings-based approach, the capital requirement for a position is computed by multiplying the face amount of the position by the appropriate risk weight, determined in accordance with the following tables.³³ Table 2 maps

long-term ratings to the appropriate risk weights. Table 3 maps short-term ratings for asset-backed commercial paper to the appropriate risk weights. The Federal Reserve has the authority, however, to override the use of certain ratings or the ratings on certain instruments, either on a case-by-case basis or through broader supervisory policy, if necessary or appropriate to address the risk that an instrument poses to a bank holding company.

The ratings-based approach can be used for certain designated asset-backed securities (including asset-backed commercial paper), recourse obligations, direct-credit substitutes, and residual interests (other than credit-enhancing I/O strips). Credit-enhancing I/O strips have been excluded from the ratings-based approach because of their high risk profile. While the ratings-based approach is available for both traded and untraded positions, the approach applies different requirements to each type of position.

Ratings-based qualification for corporate bonds or other securities. Corporate bonds or other securities not related in any way to a securitization or structured finance program do not qualify for the ratings-based approach. Only mortgage- and asset-backed securities, recourse obligations, direct-credit substitutes, and residual interests (except credit-enhancing I/O strips) retained, assumed, or issued in connection with a securitization or structured finance program qualify for the ratings-based approach.

A structured-finance program is defined as a program in which receivable interests and asset-backed securities issued by multiple participants are purchased by a special-purpose entity that repackages those exposures into securities that can be sold to investors. Structured finance programs allocate credit risks, generally, between the participants and the credit enhancement provided to the program. Corporate debt instruments, municipal bonds, and other securities that are not related to a securitization or structured finance program do not meet these definitions and thus do not qualify for the ratings-based approach.

4060.3.5.3.4.1 Traded Positions

A traded position is a position that is externally rated and that is retained, assumed, or issued in

32. A risk participation is a participation in which the originating party remains liable to the beneficiary for the full amount of an obligation (e.g., a direct-credit substitute) notwithstanding that another party has acquired a participation in that obligation.

33. The rating designations (for example, AAA, BBB, A-1, and P-1) used in the tables are illustrative only and do

not indicate any preference for, or endorsement of, any particular rating-agency designation system.

connection with an asset securitization, where there is a reasonable expectation that, in the near future, the rating will be relied on by unaffiliated investors to purchase the position or by an unaffiliated third party to enter into a transaction involving the position, such as a purchase, loan, or repurchase agreement. A traded position is only required to be rated by one rating agency.

For a traded position that has received an external rating on a long-term position that is one grade below investment grade or better, or that has received a short-term rating that is

investment grade, the bank holding company multiplies the face amount of the position by the appropriate risk weight, determined in accordance with tables 2 and 3. Stripped mortgage-backed securities and other similar instruments, such as interest-only or principal-only strips that are not credit enhancements, must be assigned to the 100 percent risk category. If a traded position has received more than one external rating, the lowest single rating will apply. Moreover, if a rating changes, the bank holding company must use the new rating.

Table 2—Risk-Weight Assignments for Externally Rated Long-Term Positions

<i>Long-term rating category</i>	<i>Rating-designation examples</i>	<i>Risk weight</i>
Highest or second-highest investment grade	AAA, AA	20 percent
Third-highest investment grade	A	50 percent
Lowest investment grade	BBB	100 percent
One category below investment grade	BB	200 percent

Table 3—Risk-Weight Assignments for Externally Rated Short-Term Positions

<i>Short-term rating category</i>	<i>Rating-designation examples</i>	<i>Risk weight</i>
Highest investment grade	A-1, P-1	20 percent
Second-highest investment grade	A-2, P-2	50 percent
Lowest investment grade	A-3, P-3	100 percent

Table 3, for short-term ratings, is not identical to table 2, for long-term ratings, because the rating agencies do not assign short-term ratings using the same methodology as they use for long-term ratings. Each short-term rating category covers a range of longer-term rating categories.³⁴ For example, a P-1 rating could map to a long-term rating that is as high as Aaa or as low as A3.

4060.3.5.3.4.2 Externally Rated, Nontraded Positions

For a rated, but untraded, position to be eligible for the ratings-based approach, it must meet certain conditions. To qualify, the position

(1) must be rated by more than one rating agency; (2) must have received an external rating on a long-term position that is one grade below investment grade or better or, for a short-term position, a rating that is investment grade or better by all rating agencies providing a rating; (3) must have ratings that are publicly available; and (4) must have ratings that are based on the same criteria used to rate traded securities. If the ratings are different, the lowest single rating will determine the risk-weight category to which the position will be assigned. This treatment does not apply to credit-enhancing I/O strips.

Split or partially rated instruments. For instruments that have been assigned separate ratings for principal and interest (split or partially rated instruments), the Federal Reserve will apply to the entire instrument the risk weight that corresponds to the lowest component rating. For example, a purchased subordinated security

34. See, for example, *Moody's Global Ratings Guide*, June 2001, p. 3.

whose principal component is rated BBB, but whose interest component is rated B, is subject to the gross-up treatment accorded to direct-credit substitutes rated B or lower. Similarly, if a portion of an instrument is unrated, the entire position will be treated as if it was unrated. In addition to this regulatory capital treatment, the Federal Reserve may also, as appropriate, adversely classify and require write-downs for an other-than-temporary impairment on unrated and below-investment-grade securities, including split or partially rated securities. (See SR-02-16.)

4060.3.5.3.4.3 Senior Positions Not Externally Rated

A position that is not externally rated (an unrated position), but that is senior or preferred in all respects (including collateralization and maturity) to a rated position that is traded, is treated as if it had the rating assigned to the rated position. The bank holding company must satisfy the Federal Reserve that such treatment is appropriate. Senior unrated positions qualify for the risk weighting of the subordinated rated positions in the same securitization transaction as long as the subordinated rated position (1) is traded and (2) remains outstanding for the entire life of the unrated position, thus providing full credit support until the unrated position matures.

Recourse obligations and direct-credit substitutes (other than residual interests) that do not qualify for the ratings-based approach (or for the internal-ratings, program-ratings, or computer-program-ratings approaches outlined below) receive "gross-up" treatment, that is, the bank holding company holding the position must hold capital against the amount of the position, plus all more senior positions, subject to the low-level-exposure requirement.³⁵ This grossed-up amount is placed into a risk-weight category according to the obligor or, if relevant, according to the guarantor or nature of the collateral. The grossed-up amount multiplied by

both the risk weight and 8 percent is never greater than the full capital charge that would otherwise be imposed on the assets if they were on the banking organization's balance sheet.³⁶

4060.3.5.3.5 Residual Interests

4060.3.5.3.5.1 Credit-Enhancing I/O Strips

After applying the concentration limit to credit-enhancing I/O strips (both purchased and retained), a bank holding company must maintain risk-based capital for a credit-enhancing I/O strip (both purchased and retained), regardless of the external rating on that position, equal to the remaining amount of the credit-enhancing I/O strip (net of any existing associated deferred tax liability), even if the amount of risk-based capital required to be maintained exceeds the full risk-based capital requirement for the assets transferred. Transactions that, in substance, result in the retention of credit risk associated with a transferred credit-enhancing I/O strip will be treated as if the credit-enhancing I/O strip was retained by the bank holding company and not transferred.

4060.3.5.3.5.2 Other Residual Interests

Residual interests that are not eligible for the ratings-based approach receive dollar-for-dollar treatment. Dollar-for-dollar treatment means, effectively, that one dollar in total risk-based capital must be held against every dollar of a residual interest retained on the balance sheet (net of any existing associated deferred tax liability), even if the amount of risk-based capital required to be maintained exceeds the full risk-based capital requirement for the assets transferred. This capital treatment applies to all residual interests, except for credit-enhancing I/O strips that have already been deducted from tier 1 capital under the concentration limit.³⁷ Transac-

35. Gross-up treatment means that a position is combined with all more senior positions in the transaction. The result is then risk-weighted based on the obligor or, if relevant, the guarantor or the nature of the collateral. For example, if a BHC retains a first-loss position (other than a residual interest) in a pool of mortgage loans that qualify for a 50 percent risk weight, the BHC would include the full amount of the assets in the pool, risk-weighted at 50 percent, in its risk-weighted assets for purposes of determining its risk-based capital ratio. The low-level-exposure rule provides that the dollar amount of risk-based capital required for assets transferred with recourse should not exceed the maximum dollar amount for which a BHC is contractually liable.

36. For assets that are assigned to the 100 percent risk-weight category, the minimum capital charge is 8 percent of the amount of assets transferred, and banking organizations are required to hold 8 cents of capital for every dollar of assets transferred with recourse. For assets that are assigned to the 50 percent risk-weight category, the minimum capital charge is 4 cents of capital for every dollar of assets transferred with recourse.

37. Residual interests that are retained or purchased credit-enhancing I/O strips are first subject to a capital concentration limit of 25 percent of tier 1 capital. For risk-based capital

tions that, in substance, result in the retention of credit risk associated with a transferred residual interest will be treated as if the residual interest was retained by the bank holding company and not transferred.

When the aggregate capital requirement for residual interests and other recourse obligations in connection with the same transfer of assets exceeds the full risk-based capital requirement for those assets, a bank holding company must maintain risk-based capital equal to the greater of the risk-based capital requirement for the residual interest or the full risk-based capital requirement for the assets transferred.

Accrued interest receivables held on credit card securitizations. The accrued interest receivable (AIR) asset constitutes a subordinated residual (retained) interest in the transferred securitized assets, and it meets the definition of recourse exposure for risk-based capital purposes. Recourse exposures (such as the AIR asset) require risk-based capital against the full, risk-weighted amount of the assets transferred with recourse, subject to the low-level-recourse rule.³⁸ The AIR asset serves as a credit enhancement to protect third-party investors in the securitization from credit losses, and it meets the definition of a residual interest under the risk-based capital adequacy rules for the treatment of recourse arrangements. Under those rules, an institution must hold dollar-for-dollar capital against residual interests, even if that amount exceeds the full equivalent risk-based capital charge on the transferred assets.³⁹ The institution is expected to hold risk-based capital in an amount consistent with the subordinated nature of the AIR asset.

In a typical credit card securitization, an institution transfers a pool of credit card receivables to a trust, as well as the rights to receive future payments of principal, interest, and fee income from those receivables. If a securitization trans-

poses (but not for leverage capital purposes), once this concentration limit is applied, a bank holding company must then hold dollar-for-dollar capital against the face amount of credit-enhancing I/O strips remaining.

38. The low-level-recourse rule limits the maximum risk-based capital requirement to the lesser of a banking organization's maximum contractual exposure or the full capital charge against the outstanding amount of assets transferred with recourse.

39. For a complete description of the appropriate capital treatment for recourse, residual interests, and credit-enhancing interest-only strips, see "Recourse, Direct Credit Substitutes, and Residual Interests in Asset Securitizations," 66 *Fed. Reg.* 59614 (November 29, 2001).

action qualifies as a sale under FAS 140, the selling institution removes the receivables that were sold from its reported assets and continues to carry any retained interests in the transferred receivables on its balance sheet; the right to these future cash flows should be reported as an AIR asset.^{40,41} Any accrued amounts (cash flows) the institution collects (for example, accrued fees and finance charges) generally must be transferred to the trust and will be used first by the trustee for the benefit of third-party investors to satisfy more senior obligations and for the payment of trust expenses (such as servicing fees, investor-certificate interest, and investor-principal charge-offs). Any remaining excess fee and finance charges will flow back to the seller.

In accounting for the sale, the AIR asset is treated as a subordinated retained interest of credit card receivables when computing the gain or loss on sale. Consistent with GAAP, this means that the value of the AIR, at the date of transfer, must be adjusted based on its relative fair (market) value. This adjustment will typically result in the carrying amount of the AIR being lower than its book (face) value prior to securitization. The AIR should be reported in regulatory reports as "Other Assets" and not as a loan receivable. (See SR-02-12 and SR-02-22.)

4060.3.5.3.6 Other Unrated Positions

A position (but not a residual interest) maintained in connection with a securitization and that is not rated by a rating agency may be risk-weighted based on the bank holding company's internal determination of the credit rating of the position, as specified in table 4 below, multiplied by the face amount of the position. The bank holding company may use three approaches to determine the capital requirements for certain unrated direct-credit substitutes and recourse obligations. Under each of these approaches, the bank holding company must satisfy the Federal Reserve that the use of the approach is appropriate for the particular bank holding company and for the exposure

40. The AIR represents fees and finance charges that have been accrued on receivables that the institution has securitized and sold to other investors. For example, in credit card securitizations, this AIR asset may include both finance charges billed but not yet collected and finance charges accrued but not yet billed on the securitized receivables.

41. Some institutions may categorize part or all of this receivable as a loan, a "due from trust" account, a retained interest in the trust, or as part of an interest-only strip receivable.

Table 4—Risk-Weight Assignments for Unrated Positions Using the Alternative Approaches¹

<i>Rating category</i>	<i>Rating-designation examples</i>	<i>Risk weight</i>
Highest or second-highest investment grade	AAA, AA	100 percent
Third-highest investment grade	A	100 percent
Lowest investment grade	BBB	100 percent
One category below investment grade	BB	200 percent

1. such as the internal-ratings approach

being evaluated. The risk weight that may be applied to an exposure under these alternative approaches is limited to a minimum of 100 percent.

4060.3.5.3.6.1 Internal Risk-Rating Systems for Asset-Backed Commercial Paper Programs

A bank holding company that has a qualifying internal risk-rating system can use that system to apply the ratings-based approach to its unrated direct-credit substitutes in asset-backed commercial paper programs. Internal risk ratings could be used to qualify such a credit enhancement for a risk weight of 100 percent or 200 percent under the ratings-based approach, but not for a risk weight of less than 100 percent.

Most sophisticated banking organizations that participate extensively in the asset-securitization business assign internal risk ratings to their credit exposures, regardless of the form of the exposure. Usually, internal risk ratings more finely differentiate the credit quality of a banking organization's exposures than the categories used to evaluate credit risk during bank holding company inspections (pass, substandard, doubtful, or loss). An individual bank holding company's internal risk ratings may be associated with a certain probability of default, loss in the event of default, and loss volatility.

The credit enhancements that sponsors obtain for their commercial paper conduits are rarely rated or traded. If an internal risk-ratings approach were not available for these unrated credit enhancements, the provider of the enhancement would have to obtain two ratings solely to avoid the gross-up treatment that would otherwise apply to nontraded positions in asset securitizations for risk-based capital purposes. However, before a provider of an enhancement decides whether to provide a credit enhancement for a particular transaction (and at what price), the

provider will generally perform its own analysis of the transaction to evaluate the amount of risk associated with the enhancement. An internal risk-ratings approach, therefore, is potentially less costly than a ratings-based approach that relies exclusively on ratings by the rating agencies for the risk weighting of these positions.

Internal risk ratings that correspond to the rating categories of the rating agencies can be mapped to risk weights under the Federal Reserve's capital standards. This mapping can be done in a way that would make it possible to differentiate the riskiness of various unrated direct-credit substitutes in asset-backed commercial paper programs based on credit risk. The use of internal risk ratings, however, may raise concerns about the accuracy and consistency of the ratings, especially because the mapping of ratings to risk-weight categories will give bank holding companies an incentive to rate their risk exposures in a way that minimizes the effective capital requirement. A bank holding company engaged in asset-backed commercial paper securitization activities that wishes to use the internal risk-ratings approach must therefore be able to demonstrate to the satisfaction of the Federal Reserve, before relying on its internal ratings, that the bank holding company's internal credit-risk rating system is adequate. Adequate internal risk-rating systems usually have the following characteristics:

1. The internal risk ratings are an integral part of a bank holding company's effective risk-management system that explicitly incorporates the full range of risks arising from the bank holding company's participation in securitization activities. The system must also fully take into account the effect of such activities on the bank holding company's risk profile and capital adequacy.

2. The internal credit ratings must link to measurable outcomes, such as the probability that a position will experience any losses, the expected losses on that position in the event of default, and the degree of variance in losses given default on that position.
3. The ratings separately consider the risk associated with the underlying loans or borrowers, as well as the risk associated with the specific positions in a securitization transaction.
4. The ratings identify gradations of risk among "pass" assets and other risk positions, and not just among assets that have deteriorated to the point that they fall into "watch" grades. Although it is not necessary for a bank holding company to use the same categories as the rating agencies, its internal ratings must correspond to the ratings of the rating agencies so that the Federal Reserve can determine which internal risk rating corresponds to each rating category of the rating agencies. A bank holding company would be responsible for demonstrating, to the satisfaction of the Federal Reserve, how these ratings correspond with the rating-agency standards that are used as the framework for the asset-securitization portion of the risk-based capital rule. This correlation is necessary so that the mapping of credit ratings to risk-weight categories in the ratings-based approach can be applied to internal ratings.
5. The ratings classify assets into each risk grade using clear, explicit criteria, including subjective factors.
6. Independent credit-risk-management or loan-review personnel assign or review the credit-risk ratings. These personnel should have adequate training and experience to ensure that they are fully qualified to perform this function.
7. An internal audit procedure periodically verifies that internal risk ratings are assigned in accordance with the bank holding company's established criteria.⁴²
8. The performance of internal ratings is tracked over time to evaluate how well risk grades are being assigned; adjustments are being made to the rating system when the perfor-

mance of the rated positions diverges from assigned ratings; and the individual ratings are adjusted accordingly.

9. Credit-risk rating assumptions are consistent with, or more conservative than, the credit-risk rating assumptions and methodologies of the rating agencies.

If it determines that a bank holding company's rating system is not adequate, the Federal Reserve may preclude the bank holding company from applying the internal risk-ratings approach to new transactions for risk-based capital purposes until the deficiencies have been remedied. Additionally, depending on the severity of the problems identified, the Federal Reserve may decline to rely on the internal risk ratings that the bank holding company had applied to previous transactions for purposes of determining its regulatory capital requirements.

4060.3.5.3.6.2 Ratings of Specific Unrated Positions in Structured Financing Programs

A bank holding company may also use a rating obtained from a rating agency for an unrated direct-credit substitute or recourse obligation (other than a residual interest) that is assumed or retained in connection with a structured finance program, if a rating agency has reviewed the terms of the program (according to the specifications set by the rating agency) and stated a rating for positions associated with the program. If the program has options for different combinations of assets, standards, internal credit enhancements, and other relevant factors, and if the rating agency specifies ranges of rating categories to them, the bank holding company may apply the rating category that corresponds to the bank holding company's position. To rely on a program rating, the bank holding company must demonstrate to the Federal Reserve's satisfaction that the credit-risk rating assigned to the program meets the same standards generally used by rating agencies for rating traded positions.

The bank holding company must also demonstrate to the Federal Reserve's satisfaction that the criteria underlying the rating agency's assignment of ratings for the structured financing program are satisfied for the particular position. If a bank holding company participates in a securitization sponsored by another party, the Federal Reserve may authorize the bank holding company to use this approach based on a programmatic rating obtained by the sponsor of the program.

42. The audit may be performed by any group within the organization that is qualified to audit the system and is independent of both the group that makes the decision to extend credit to the asset-backed commercial paper program and the groups that develop and maintain the internal credit-risk rating system. (See SR-02-16.)

Bank holding companies with limited involvement in securitization activities may find the above alternative to be useful. In addition, some bank holding companies extensively involved in securitization activities already rely on ratings of the credit-risk positions under their securitization programs as part of their risk-management practices. Such bank holding companies can rely on these ratings for regulatory capital purposes if the ratings are part of a sound overall risk-management process and the ratings reflect the risk of nontraded positions to the bank holding companies. This approach in a structured financing program can be used to qualify a direct-credit substitute or recourse obligation (but not a residual interest) for a risk weight of 100 percent or 200 percent of the face value of the position under the ratings-based approach, but not for a risk weight of less than 100 percent.

4060.3.5.3.6.3 Credit-Assessment Computer Programs

A bank holding company (particularly a bank holding company with limited involvement in securitization activities) may use an internal ratings-based approach if it is using an acceptable credit-assessment computer program, developed by a rating agency, to determine the rating of a direct-credit substitute or a recourse obligation (but not a residual interest) issued in connection with a structured finance program. To be used by a bank holding company for risk-based capital purposes, a computer program must have been developed by a rating agency. Further, the bank holding company must demonstrate to the satisfaction of the Federal Reserve that the computer program's credit assessments correspond credibly and reliably to the rating standards of the rating agencies for traded positions in securitizations and with the rating of traded positions in the financial markets. The latter would generally be shown if investors and other market participants significantly used the computer program for risk-assessment purposes. In addition, the bank holding company must demonstrate to the Federal Reserve's satisfaction that the program was designed to apply to its particular direct-credit substitute or recourse exposure and that it has properly implemented the computer program. In general, sophisticated bank holding companies with extensive securitization activities should only use this approach if the computer program is an integral part of their risk-management systems and if the bank holding company's sys-

tems fully capture the risks from its securitization activities. This computer-program approach can be used to qualify a direct-credit substitute or recourse obligation (but not a residual interest) for a risk weight of 100 percent or 200 percent of the face value of the position under the ratings-based approach, but not for a risk weight of less than 100 percent.

4060.3.5.3.7 Limitations on Risk-Based Capital Requirements

4060.3.5.3.7.1 Low-Level Exposure

If a bank holding company's maximum contractual exposure to loss retained or assumed in connection with a recourse obligation or a direct-credit substitute, except for a residual interest, is less than the effective risk-based capital requirement for the enhanced assets, the risk-based capital requirement is limited to the maximum contractual exposure, less any recourse liability account established in accordance with GAAP. This limitation does not apply when a bank holding company provides credit enhancement beyond any contractual obligation to support assets it has sold.

4060.3.5.3.7.2 Mortgage-Related Securities or Participation Certificates Retained in a Mortgage Loan Swap

If a bank holding company holds a mortgage-related security or a participation certificate as a result of a mortgage loan swap with recourse, capital is required to support the recourse obligation plus the percentage of the mortgage-related security or participation certificate that is not covered by the recourse obligation. The total amount of capital required for the on-balance-sheet asset and the recourse obligation, however, is limited to the capital requirement for the underlying loans, calculated as if the bank holding company continued to hold the loans as on-balance-sheet assets.

4060.3.5.3.7.3 Related On-Balance-Sheet Assets

If a recourse obligation or a direct-credit substitute also appears as a balance-sheet asset, the balance-sheet asset is not included in a bank

holding company's risk-weighted assets to the extent the value of the balance-sheet asset is already included in the off-balance-sheet credit-equivalent amount for the recourse obligation or direct-credit substitute. In the case of loan-servicing assets and similar arrangements with embedded recourse obligations or direct-credit substitutes, both the on-balance-sheet assets and the related recourse obligations and direct-credit substitutes must be separately risk-weighted and incorporated into the risk-based capital calculation.

4060.3.5.3.8 Risk-Based Capital Treatment of Certain Other Types of Off-Balance-Sheet Items and Transactions

4060.3.5.3.8.1 Distinction Between Financial and Performance Standby Letters of Credit

For risk-based capital purposes, the vast majority of standby letters of credit a bank holding company issues are considered financial in nature. On the one hand, in issuing a financial standby letter of credit, a bank holding company guarantees that the account party will fulfill a contractual financial obligation that involves payment of money. On the other hand, in issuing a performance standby letter of credit, a bank holding company guarantees that the account party will fulfill a contractual nonfinancial obligation, that is, an obligation that does not entail the payment of money. For example, a standby letter of credit that guarantees that an insurance company will pay as required under the terms of a policy is deemed to be financial and is converted at 100 percent, while a letter of credit that guarantees a contractor will pave a street according to certain specifications is deemed to be performance-related and is converted at 50 percent. Financial standby letters of credit have a higher conversion factor in large part because, unlike performance standby letters of credit, they tend to be drawn down only when the account party's financial condition has deteriorated.

4060.3.5.3.8.2 Sale and Repurchase Agreements and Forward Agreements

Forward agreements are legally binding contractual obligations to purchase assets with certain

drawdown at a specified future date. Such obligations include forward purchases, forward forward deposits placed,⁴³ and partly paid shares and securities; they do not include commitments to make residential mortgage loans or forward foreign-exchange contracts.

4060.3.5.3.8.3 Participations of Off-Balance-Sheet Transactions

If a standby letter of credit or commitment has been participated to other institutions in the form of a syndication, as defined in the instructions to the Call Report, that is, if each bank holding company is responsible only for its pro rata share of loss and there is no recourse to the originating bank holding company, each bank holding company includes only its pro rata share of the standby or commitment in its risk-based capital calculation.

The treatment differs, however, if the participation takes the form of a conveyance of a risk participation. In such a participation, the originating bank holding company remains liable to the beneficiary for the full amount of the standby or commitment if the institution that has acquired the participation fails to pay when the instrument is drawn. Under this arrangement, the originating bank holding company is exposed to the credit risk of the institution that has acquired the conveyance rather than that of the account party. Accordingly, for risk-based capital purposes, the originating bank holding company should convert the full amount of the standby or commitment to an on-balance-sheet credit-equivalent amount. The credit-equivalent amount of the portion of the credit that has not been conveyed is assigned to the risk category appropriate to the obligor, after giving effect to any collateral or guarantees. The portion that has been conveyed is assigned either to the same risk category as the obligor or to the risk category appropriate to the institution acquiring the participation, whichever category carries the lower risk weight. Any remainder is assigned to the risk category appropriate to the obligor, guarantor, or collateral. For example, the pro rata share of the full amount of the assets supported, in whole or in part, by a direct-credit substitute conveyed as a risk participation to a U.S. domestic depository institution or foreign bank holding company is assigned to the 20 percent risk category. Risk participations with a

⁴³ Forward forward deposits accepted are treated as interest-rate contracts.

remaining maturity of over one year that are conveyed to non-OECD banks are to be assigned to the 100 percent risk category, unless a lower risk category is appropriate to the obligor, guarantor, or collateral.

4060.3.5.3.9 Small-Business Loans and Leases on Personal Property Transferred with Recourse (FAS 140 Sales)

A qualifying banking organization (that is, a bank holding company) that has transferred small-business loans and leases on personal property (small-business obligations) with recourse can include in weighted-risk assets only the amount of retained recourse, provided two conditions are met. First, the transaction must be treated as a FAS 140 sale under GAAP and, second, the banking organization must establish pursuant to GAAP a noncapital reserve sufficient to meet the organization's reasonably estimated liability under the recourse arrangement. Only loans and leases to businesses that meet the criteria for a small-business concern established by the Small Business Administration under section 3(a) of the Small Business Act are eligible for this capital treatment.

A banking organization qualifies if it meets the criteria for well capitalized or, by order of the Board, adequately capitalized, as those criteria are set forth in the Board's prompt-corrective-action regulation for state member banks (12 C.F.R. 208.40). For purposes of determining whether an organization meets these criteria, its capital ratios must be calculated without regard to the capital treatment for transfers of small-business obligations with recourse. The total outstanding amount of recourse retained by a qualifying banking organization on transfers of small-business obligations receiving the preferential capital treatment cannot exceed 15 percent of the organization's total risk-based capital. By order, the Board may approve a higher limit.

If a bank holding company ceases to be qualifying or exceeds the 15 percent capital limitation, the preferential capital treatment will continue to apply to any transfers of small-business obligations with recourse that were consummated during the time that the organization was qualifying and did not exceed the capital limit.

4060.3.5.3.10 Securities Lent

Examiners are to review securities-lent transactions of banking organizations and verify that, when banking organizations have risk of loss as either principal or agent, the transaction is converted at 100 percent and assigned to the appropriate risk-weight category. The guidelines treat securities lent in two ways, depending on the nature of the transactions and the risk of loss. If, however, banking organizations are acting as their customers' agent and do not indemnify their customers against loss, the amount of securities lent is excluded from risk-based capital calculations. If banking organizations lend their own securities or, acting as an agent for a customer, lend the customers' securities and indemnify their customers against loss, the amount of securities lent is converted at 100 percent and assigned the risk weight appropriate to the obligor or, if applicable, to any collateral delivered to the lending organization or the independent custodian acting on the lending organization's behalf. Where a banking organization is acting as agent for a customer in a transaction involving the lending or sale of securities that is collateralized by cash delivered to the banking organization, the transaction is deemed to be collateralized by cash on deposit in a subsidiary depository institution for purposes of determining the appropriate risk-weight category—provided that (1) any indemnification is limited to no more than the difference between the market value of the securities and the cash collateral received and (2) any reinvestment risk associated with that cash collateral is borne by the customer.

If securities lent are secured by cash on deposit in subsidiary depository institutions, the appropriate risk weight is either zero or 20 percent, depending on qualification criteria. Claims collateralized by cash on deposit in subsidiary depository institutions for which a margin of collateral is maintained on a daily basis—fully taking into account any change in the bank's exposure to the obligor or counterparty under a claim in relation to the market value of the collateral held in support of that claim—are assigned the zero risk weight. When securities lent are collateralized by cash on deposit in subsidiary lending institutions for which a daily margin is *not* maintained, the cash collateral is assigned a 20 percent risk weight.

4060.3.5.3.11 Commitments

Commitments are defined as any legally binding arrangements that obligate a bank holding company to extend credit in the form of loans or leases; to purchase loans, securities, or other assets; or to participate in loans and leases. Commitments also include overdraft facilities, revolving credit, home equity and mortgage lines of credit, eligible ABCP liquidity facilities, and similar transactions. Normally, commitments involve a written contract or agreement and a commitment fee, or some other form of consideration. Commitments are included in weighted-risk assets regardless of whether they contain "material adverse change" clauses or other provisions that are intended to relieve the issuer of its funding obligation under certain conditions. In the case of commitments structured as syndications, where the bank holding company is obligated solely for its pro rata share, only the bank holding company's proportional share of the syndicated commitment is taken into account in calculating the risk-based capital ratio.

4060.3.5.3.11.1 Commitments to Make Off-Balance-Sheet Transactions

A commitment to make a standby letter of credit is considered to be a standby letter of credit. Accordingly, such a commitment should be converted to an on-balance-sheet credit-equivalent amount at 100 percent if it is a commitment to make a financial standby letter of credit or at 50 percent if it is a commitment to make a performance standby letter of credit.

A commitment to make a commitment is treated as a single commitment whose maturity is the combined maturity of the two commitments. For example, a 6-month commitment to make a 1-year commitment is considered to be a single 18-month commitment. Since the maturity is over one year, such a commitment would be accorded the 50 percent conversion factor appropriate to long-term commitments, rather than the zero percent conversion factor that would be accorded to separate unrelated short-term commitments of six months and one year.

A commitment to make a commercial letter of credit may be treated as either a commitment or a commercial letter of credit, whichever results in the lower conversion factor. Normally, this would mean that a commitment under one year to make a commercial letter of credit would

be treated as a commitment and converted at zero percent, while a similar commitment of over one year would be treated as a commercial letter of credit and converted at 20 percent.

If a commitment facility is structured so that it can be drawn down in several forms, such as a standby letter of credit, a loan, or a commercial letter of credit, the entire facility should be treated as a commitment to extend credit in the form that incurs the highest capital charge. Thus, if a facility could be drawn down in any of the three forms just cited, the entire facility would be treated as a commitment to issue a standby letter of credit and would be converted at 100 percent rather than being treated as a commitment to make a loan or commercial letter of credit, which would have a lower conversion factor.

4060.3.5.3.11.2 Unused Commitments

Except for eligible ABCP liquidity facilities,⁴⁴ unused portions of commitments (including underwriting commitments and commercial and consumer credit commitments) that have an original maturity of one year or less are converted at zero percent.

Unused commitments with an original maturity of over one year are converted at 50 percent. For this purpose, "original maturity" is defined as the length of time between the date the commitment is issued and the earliest date on which (1) the banking organization can, at its option, unconditionally cancel⁴⁵ the commitment *and* (2) the banking organization is scheduled to (and as a normal practice actually does) review the facility to determine whether or not the unused commitment should be extended. (See SR-90-23 regarding loan commitments and put options.)

Banking organizations must continue to review unused commitments at least annually to determine that they qualify for short-term commitment treatment. Examiners are to review unused commitments to determine that they meet the conditions for being treated as short-term or long-term and are appropriately weighted for risk-based capital calculations.

A commitment may be issued that expires within one year with the understanding that the commitment will be renewed upon expiration subject to a thorough credit review of the obli-

44. Unused portions of eligible ABCP liquidity facilities with an original maturity of one year or less are converted at 10 percent.

45. This does not refer to material adverse change clauses.

gor. Such a commitment may be converted at zero percent only if (1) the renegotiation process is carried out in good faith, involves a full credit assessment of the obligor, and allows the bank holding company the flexibility to alter the terms and conditions of the new commitment; (2) the bank holding company has absolute discretion to decline renewal or extension of the commitment; and (3) the renegotiated commitment expires within 12 months from the time it is made. Some commitments contain unusual renegotiation arrangements that would give the borrower a considerable amount of advance notice that a commitment would not be renewed. Provisions of this kind can have the effect of creating a rolling-commitment arrangement that should be treated for risk-based capital purposes as a long-term commitment and, thus, be converted to a credit-equivalent amount at 50 percent. Normally, the renegotiation process should take no more than six to eight weeks, and in many cases it should take less time. The renegotiation period should immediately precede the expiration date of the commitment. The reasons for provisions in a commitment arrangement that would appear to provide for a protracted renegotiation period should be thoroughly documented by the bank holding company and reviewed by the examiner.

A commitment may be structured to be drawn down in a number of tranches, some exercisable in one year or less and others exercisable in over one year. The full amount of such a commitment is deemed to be over one year and converted at 50 percent. Some long-term commitments may permit the customer to draw down varying amounts at different times to accommodate, for example, seasonal borrowing needs. The 50 percent conversion factor should be applied to the maximum amount that could be drawn down under such commitments.

4060.3.5.3.12 *Asset-Backed Commercial Paper Program Assets*

An asset-backed commercial paper (ABCP) program typically is a program through which a bank holding company provides funding to its corporate customers by sponsoring and administering a bankruptcy-remote special-purpose entity that purchases asset pools from, or extends loans to, those customers.⁴⁶ The asset pools in an

ABCP program might include, for example, trade receivables, consumer loans, or asset-backed securities. The ABCP program raises cash to provide funding to the banking organization's customers, primarily (that is, more than 50 percent of the ABCP's issued liabilities) through the issuance of externally rated commercial paper into the market. Typically, the sponsoring bank holding company provides liquidity and credit enhancements to the ABCP program. These enhancements aid the program in obtaining high credit ratings that facilitate the issuance of the commercial paper.⁴⁷

As a result of FIN 46-R, bank holding companies are to include all assets of consolidated ABCP programs as part of their on-balance-sheet assets for purposes of calculating the tier 1 leverage capital ratio.

4060.3.5.3.12.1 *Liquidity Facilities Supporting ABCP*

Liquidity facilities supporting ABCP often take the form of commitments to lend to, or purchase assets from, the ABCP programs in the event that funds are needed to repay maturing commercial paper. Typically, this need for liquidity is due to a timing mismatch between cash collections on the underlying assets in the program and scheduled repayments of the commercial paper issued by the program.

A bank holding company that provides liquidity facilities to ABCP is exposed to credit risk regardless of the term of the liquidity facilities. For example, an ABCP program may require a liquidity facility to purchase assets from the program at the first sign of deterioration in the credit quality of an asset pool, thereby removing such assets from the program. In such an event, a draw on the liquidity facility exposes the bank holding company to credit risk.

Short-term commitments with an original maturity of one year or less expose bank holding companies to a lower degree of credit risk than longer-term commitments. This difference in the degree of credit risk is reflected in the

securities arbitrage programs.

47. A bank is considered the "sponsor of an ABCP program" if it establishes the program; approves the sellers permitted to participate in the program; approves the asset pools to be purchased by the program; or administers the program by monitoring the assets, arranging for debt placement, compiling monthly reports, or ensuring compliance with the program documents and with the program's credit and investment policy.

46. The definition of "ABCP program" generally includes structured investment vehicles (entities that earn a spread by issuing commercial paper and medium-term notes and using the proceeds to purchase highly rated debt securities) and

risk-based capital requirement for the different types of exposure. The Board's capital guidelines impose a 10 percent credit-conversion factor on eligible short-term liquidity facilities supporting ABCP. A 50 percent credit-conversion factor applies to eligible long-term ABCP liquidity facilities. These credit-conversion factors apply regardless of whether the structure issuing the ABCP meets the rule's definition of an ABCP program. For example, a capital charge would apply to an eligible short-term liquidity facility that provides liquidity support to ABCP where the ABCP constitutes less than 50 percent of the securities issued by the program, thus causing the issuing structure not to meet the rule's definition of an ABCP program. However, if a bank holding company (1) does not meet this definition and must include the program's assets in its risk-weighted asset base or (2) otherwise chooses to include the program's assets in risk-weighted assets, then no risk-based capital requirement will be assessed against any liquidity facilities provided by the bank holding company that support the program's ABCP. Ineligible liquidity facilities will be treated as recourse obligations or direct-credit substitutes for the purposes of the Board's risk-based capital guidelines.

The resulting credit-equivalent amount would then be risk-weighted according to the underlying assets or the obligor, after considering any collateral or guarantees, or external credit ratings, if applicable. For example, if an eligible short-term liquidity facility providing liquidity support to ABCP covered an asset-backed security (ABS) externally rated AAA, then the notional amount of the liquidity facility would be converted at 10 percent to an on-balance-sheet credit-equivalent amount and assigned to the 20 percent risk-weight category appropriate for AAA-rated ABS.⁴⁸

4060.3.5.3.12.2 Overlapping Exposures to an ABCP Program

A bank holding company may have multiple overlapping exposures to a single ABCP program (for example, both a program-wide credit enhancement and multiple pool-specific liquidity facilities to an ABCP program that is not consolidated for risk-based capital purposes). A

48. See section III.B.3.c. of the guidelines (12 C.F.R. 225, appendix A).

bank holding company must hold risk-based capital only once against the assets covered by the overlapping exposures. Where the overlapping exposures are subject to different risk-based capital requirements, the bank holding company must apply the risk-based capital treatment that results in the highest capital charge to the overlapping portion of the exposures.

For example, assume a bank holding company provides a program-wide credit enhancement that would absorb 10 percent of the losses in all of the underlying asset pools in an ABCP program and pool-specific liquidity facilities that cover 100 percent of each of the underlying asset pools. The bank holding company would be required to hold capital against 10 percent of the underlying asset pools because it is providing the program-wide credit enhancement. The bank holding company would also be required to hold capital against 90 percent of the liquidity facilities it is providing to each of the underlying asset pools.

If different bank holding companies have overlapping exposures to an ABCP program, however, each organization must hold capital against the entire maximum amount of its exposure. As a result, while duplication of capital charges will not occur for individual bank holding companies, some systemic duplication may occur where multiple banking organizations have overlapping exposures to the same ABCP program.

4060.3.5.3.12.3 Asset-Quality Test

For a liquidity facility, either short- or long-term, that supports ABCP *not* to be considered a recourse obligation or a direct-credit substitute, it must meet the rule's definition of an "eligible ABCP liquidity facility."⁴⁹ An eligible ABCP liquidity facility must meet a reasonable asset-quality test that, among other things, precludes funding assets that are 90 days or more past due

49. An "eligible ABCP liquidity facility" is a liquidity facility that supports ABCP, in form or in substance, and is subject to an asset-quality test at the time of draw that precludes funding against assets that are 90 days or more past due or in default. In addition, if the assets that an eligible ABCP liquidity facility is required to fund against are externally rated assets or exposures at the inception of the facility, the facility can be used to fund only those assets or exposures that are externally rated investment grade at the time of funding. Notwithstanding the eligibility requirements set forth in the two preceding sentences, a liquidity facility will be considered an eligible ABCP liquidity facility if the assets that are funded under the liquidity facility and that do not meet the eligibility requirements are guaranteed, either conditionally or unconditionally, by the U.S. government or its agencies or by the central government of an OECD country.

or in default. When assets are 90 days or more past due, they typically have deteriorated to the point where there is an extremely high probability of default. Assets that are 90 days past due, for example, often must be placed on nonaccrual status in accordance with the agencies' Uniform Retail Credit Classification and Account Management Policy.⁵⁰ Further, they generally must also be classified Substandard under that policy.

The rule's asset-quality test specifically allows a bank holding company to reflect certain guarantees providing credit protection to the bank holding company providing the liquidity facility. In particular, the "days-past-due limitation" is not applied with respect to assets that are either conditionally or unconditionally guaranteed by the U.S. government or its agencies or by another OECD central government. To qualify as an eligible ABCP liquidity facility, if the assets covered by the liquidity facility are initially externally rated (at the time the facility is provided), the facility can be used to fund only those assets that are externally rated investment grade at the time of funding.

The practice of purchasing assets that are externally rated below investment grade out of an ABCP program is considered the equivalent of providing credit protection to the commercial paper investors. Thus, liquidity facilities permitting purchases of below-investment-grade securities will be considered either recourse obligations or direct-credit substitutes. However, the "investment-grade" limitation is not applied in the asset-quality test with respect to assets that are conditionally or unconditionally guaranteed by the U.S. government or its agencies or by another OECD central government. If the asset-quality tests are not met (that is, if a bank holding company actually funds through the liquidity facility assets that do not satisfy the facility's asset-quality tests), the liquidity facility will be considered a recourse obligation or a direct-credit substitute and generally will be converted at 100 percent.

4060.3.5.3.13 *Derivative Contracts (Interest-Rate, Exchange-Rate, and Commodity- (Including Precious Metals) and Equity-Linked Contracts)*

Credit-equivalent amounts are computed for each of the following off-balance-sheet derivative contracts:

1. interest-rate contracts
 - a. single-currency interest-rate swaps
 - b. basis swaps
 - c. forward rate agreements
 - d. interest-rate options purchased (including caps, collars, and floors purchased)
 - e. any other instrument linked to interest rates that gives rise to similar credit risks (including when-issued securities and forward forward deposits accepted)
2. exchange-rate contracts
 - a. cross-currency interest-rate swaps
 - b. forward foreign-exchange-rate contracts
 - c. currency options purchased
 - d. any other instrument linked to exchange rates that gives rise to similar credit risks
3. equity derivative contracts
 - a. equity-linked swaps
 - b. equity-linked options purchased
 - c. forward equity-linked contracts
 - d. any other instrument linked to equities that gives rise to similar credit risks
4. commodity (including precious metal) derivative contracts
 - a. commodity-linked swaps
 - b. commodity-linked options purchased
 - c. forward commodity-linked contracts
 - d. any other instrument linked to commodities that gives rise to similar credit risks

Derivative-contract exceptions. Exchange-rate contracts with an original maturity of 14 or fewer calendar days and derivative contracts traded on exchanges that require daily receipt and payment of cash-variation margin may be excluded from the risk-based ratio calculation. Gold contracts are accorded the same treatment as exchange-rate contracts except that gold contracts with an original maturity of 14 or fewer calendar days are included in the risk-based ratio calculation. Over-the-counter options purchased are included and treated in the same way as other derivative contracts.

4060.3.5.3.13.1 Calculation of Credit-Equivalent Amounts and the Application of Risk Weights

The credit-equivalent amount of a derivative contract that is not subject to a qualifying bilateral netting contract in accordance with subsection 4060.3.5.3.15 is equal to the sum of—

1. the current exposure (sometimes referred to as the replacement cost) of the contract and

50. See 65 Fed. Reg. 36904 (June 12, 2000).

2. an estimate of the potential future credit exposure of the contract.

The current exposure is determined by the mark-to-market value of the contract. If the mark-to-market value is positive, then the current exposure is equal to that mark-to-market value. If the mark-to-market value is zero or negative, then the current exposure is zero. Mark-to-market values are measured in dollars, regardless of the currency or currencies specified in the contract, and should reflect changes in the relevant rates, prices, and indices, as well as in counterparty credit quality.

The potential future credit exposure of a contract, including a contract with a negative mark-to-market value, is estimated by multiplying the notional principal amount of the contract by a credit-conversion factor. Banking organizations should use, subject to examiner review, the effective rather than the apparent or stated notional amount in this calculation. The conversion factors (in percent) are listed on the next page.

For a contract that is structured such that on specified dates any outstanding exposure is settled and the terms are reset so that the market value of the contract is zero, the remaining maturity is equal to the time until the next reset date. For an interest-rate contract with a remaining maturity of more than one year that meets these criteria, the minimum conversion factor is 0.5 percent.

For a contract with multiple exchanges of principal, the conversion factor is multiplied by the number of remaining payments in the contract. A derivative contract not included in the definitions of interest-rate, exchange-rate, equity, or commodity contracts as set forth in subsection 4060.3.5.3.15 is subject to the same conversion factors as a commodity, excluding precious metals.

No potential future credit exposure is calculated for a single-currency interest-rate swap in which payments are made based on two floating-rate indices, so-called floating/floating or basis swaps; the credit exposure on these contracts is evaluated solely on the basis of their mark-to-market values.

The Board has noted that the following conversion factors, which are based on observed volatilities of the particular types of instruments, are subject to review and modification in light of changing volatilities or market conditions.

100 Percent Credit-Conversion Factor for Off-Balance-Sheet Items for BHCs

1. direct-credit substitutes (These include general guarantees of indebtedness and all guarantee-type instruments, including standby letters of credit backing the financial obligations of other parties.)
2. in the case of direct-credit substitutes, risk participations that have been conveyed or acquired, or risk participations in banker's acceptances conveyed to other institutions, and risk participations with a remaining maturity of over one year that are conveyed to non-OECD banks (unless a lower risk category is appropriate to be assigned to the obligor, guarantor, or collateral)
3. sale and repurchase agreements, assets sold with recourse that are not included on the balance sheet, and ineligible ABCP liquidity facilities
4. forward agreements to purchase assets, including financing facilities, on which drawdown is certain
5. securities lent for which the banking organization is at risk

50 Percent Credit-Conversion Factor

1. transaction-related contingencies (These include bid bonds, performance bonds, warranties, and standby letters of credit related to particular transactions and performance standby letters of credit, as well as acquisitions of risk participations in performance standby letters of credit. Performance standby letters of credit represent obligations backing the performance of nonfinancial or commercial contracts or undertakings.)
2. unused portions of commitments, including eligible ABCP liquidity facilities, with an original maturity exceeding one year, including underwriting commitments and commercial and consumer credit commitments
3. revolving-underwriting facilities (RUFs), note-issuance facilities (NIFs), and other similar arrangements

20 Percent Credit-Conversion Factor

Short-term, self-liquidating, trade-related contingencies that arise from the movement of goods, including commercial letters of credit and other documentary letters of credit collateralized by the underlying shipments.

CONVERSION FACTORS

[in percent]

<i>Remaining maturity</i>	<i>Interest-rate</i>	<i>Exchange-rate and gold</i>	<i>Equity</i>	<i>Commodity, excluding precious metals</i>	<i>Precious metals, except gold</i>
One year or less	0.0	1.0	6.0	10.0	7.0
Over one to five years	0.5	5.0	8.0	12.0	7.0
Over five years	1.5	7.5	10.0	15.0	8.0

10 Percent Credit-Conversion Factor

- Unused portions of ABCP liquidity facilities with an original maturity of one year or less.
- Bank holding companies that are subject to the market-risk capital rules are precluded from applying those market-risk rules to positions held in the bank holding company's trading book that act, in form or in substance, as liquidity facilities supporting asset-backed commercial paper (ABCP). Bank holding companies are required to convert the notional amount of all eligible ABCP liquidity facilities, in form or in substance, with an original maturity of one year or less that are carried in the trading account at 10 percent to determine the appropriate credit-equivalent amount even though those facilities are structured or characterized as derivatives or other trading-book assets. Liquidity facilities that support ABCP that are not eligible ABCP liquidity facilities are to be considered recourse obligations or direct-credit substitutes and assessed the appropriate risk-based capital requirement in accordance with section III.B.3. of appendix A.

Zero Percent Credit-Conversion Factor

Unused portions of commitments (with the exception of eligible ABCP liquidity facilities) with an original maturity of one year or less, or which are unconditionally cancelable at any time, provided a separate credit decision is made before each drawing under the facility.

See the risk-based capital guidelines for information on the use, treatment, and application of credit-conversion factors for off-balance-sheet items and transactions.

4060.3.5.3.13.2 Applying Risk Weights

Once the credit-equivalent amount for a derivative contract, or a group of derivative contracts subject to a qualifying bilateral netting contract, has been determined, that amount is assigned to the risk-weight category appropriate to the counterparty, or, if relevant, the guarantor or the nature of any collateral.⁵¹ However, the maximum weight that will be applied to the credit-equivalent amount of such contracts is 50 percent.

4060.3.5.3.13.3 Avoidance of Double-Counting of Derivative Contracts

In certain cases, credit exposures arising from derivative contracts may be reflected, in part, on the balance sheet. To avoid double-counting such exposures in the assessment of capital adequacy and, perhaps, assigning inappropriate risk weights, counterparty credit exposures arising from the derivative instruments covered by the guidelines may need to be excluded by examiners from balance-sheet assets in calculating a banking organization's risk-based capital ratios. This exclusion will eliminate the possibility that an organization could be required to hold capital against both an off-balance-sheet and on-balance-sheet amount for the same item. This treatment is not accorded to margin accounts and accrued receivables related to interest-rate and exchange-rate contracts.

The aggregate on-balance-sheet amount excluded from the risk-based capital calculation

⁵¹ For derivative contracts, sufficiency of collateral or guarantees is determined by the market value of the collateral or the amount of the guarantee in relation to the credit-equivalent amount. Collateral and guarantees are subject to the same provisions noted under section III.B. of appendix A of Regulation Y.

is equal to the lower of—

1. each contract's positive on-balance-sheet amount or
2. its positive market value included in the off-balance-sheet risk-based capital calculation.

For example, a forward contract that is marked to market will have the same market value on the balance sheet as is used in calculating the credit-equivalent amount for off-balance-sheet exposures under the guidelines. Therefore, the on-balance-sheet amount is not included in the risk-based capital calculation. Where either the contract's on-balance-sheet amount or its market value is negative or zero, no deduction from on-balance-sheet items is necessary for that contract.

If the positive on-balance-sheet asset amount exceeds the contract's market value, the excess (up to the amount of the on-balance-sheet asset) should be included in the appropriate risk-weight category. For example, a purchased option will often have an on-balance-sheet amount equal to the fee paid until the option expires. If that amount exceeds market value, the excess of carrying value over market value would be included in the appropriate risk-weight category for purposes of the on-balance-sheet portion of the calculation.

4060.3.5.3.14 *Treatment of Commodity and Equity Contracts*

Credit-equivalent amounts of swap agreements and futures, forwards, and option contracts on commodities, equities, and equity indexes are calculated in the same way as credit-equivalent amounts of foreign-exchange-rate contracts. Contracts on commodities, equities, and equity indexes traded on exchanges that require daily payment of variation margin are excluded from the risk-based capital calculation. Such a margining arrangement requires the marking to market of contracts and the settling of the resulting gains and losses in cash on a daily basis.

4060.3.5.3.15 *Netting of Swaps and Similar Contracts*

Netting refers to the offsetting of positive and negative mark-to-market values in the determination of a current exposure to be used in the

calculation of a credit-equivalent amount. Any legally enforceable form of bilateral netting (that is, netting with a single counterparty) of derivative contracts is recognized for purposes of calculating the credit-equivalent amount provided that—

1. the netting is accomplished under a written netting contract that creates a single legal obligation, covering all included individual contracts, with the effect that the organization would have a claim to receive, or an obligation to receive or pay, only the net amount of the sum of the positive and negative mark-to-market values on included individual contracts in the event that a counterparty, or a counterparty to whom the contract has been validly assigned, fails to perform due to default, insolvency, liquidation, or similar circumstances;
2. the banking organization obtains written and reasoned legal opinions that in the event of a legal challenge—including one resulting from default, insolvency, liquidation, or similar circumstances—the relevant court and administrative authorities would find the banking organization's exposure to be such a net amount under—
 - a. the law of the jurisdiction in which the counterparty is chartered or the equivalent location in the case of noncorporate entities, and if a branch of the counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
 - b. the law that governs the individual contracts covered by the netting contract; and
 - c. the law that governs the netting contract;
3. the banking organization establishes and maintains procedures to ensure that the legal characteristics of netting contracts are kept under review in light of possible changes in relevant law; and
4. the banking organization maintains in its files documentation adequate to support the netting of rate contracts, including a copy of the bilateral netting contract and necessary legal opinions.

A contract containing a walkaway clause is not eligible for netting for purposes of calculating the credit-equivalent amount.⁵²

By netting individual contracts for the pur-

52. A walkaway clause is a provision in a netting contract that permits a nondefaulting counterparty to make lower payments than it would make otherwise under the contract, or no payment at all, to a defaulter or to the estate of a defaulter, even if the defaulter or the estate of the defaulter is a net creditor under the contract.

pose of calculating credit-equivalent amounts of derivative contracts, a banking organization represents that it has met the requirements of the risk-based measure of the capital adequacy guidelines for BHCs and that all the appropriate documents are in the organization's files and available for inspection by the Federal Reserve. The Federal Reserve may determine that a banking organization's files are inadequate or that a netting contract, or any of its underlying individual contracts, may not be legally enforceable. If such a determination is made, the netting contract may be disqualified from recognition for risk-based capital purposes, or underlying individual contracts may be treated as though they are not subject to the netting contract.

The credit-equivalent amount of contracts that are subject to a qualifying bilateral netting contract is calculated by adding—

1. the current exposure of the netting contract (net current exposure) and
2. the sum of the estimates of the potential future credit exposures on all individual contracts subject to the netting contract (gross potential future exposure) adjusted to reflect the effects of the netting contract.⁵³

The net current exposure of the netting contract is determined by summing all positive and negative mark-to-market values of the individual contracts included in the netting contract. If the net sum of the mark-to-market values is positive, then the current exposure of the netting contract is equal to that sum. If the net sum of the mark-to-market values is zero or negative, then the current exposure of the netting contract is zero. The Federal Reserve may determine that a netting contract qualifies for risk-based capital netting treatment even though certain individual contracts may not qualify. In such instances, the nonqualifying contracts should be treated as individual contracts that are not subject to the netting contract.

Gross potential future exposure or A_{gross} is calculated by summing the estimates of potential future exposure (determined in accordance with section 4060.3.5.3.13.1) for each individual contract subject to the qualifying bilateral netting contract.

The effects of the bilateral netting contract on the gross potential future exposure are recog-

nized through the application of a formula that results in an adjusted add-on amount (A_{net}). The formula, which employs the ratio of net current exposure to gross current exposure (NGR), is expressed as:

$$A_{\text{net}} = (0.4 \times A_{\text{gross}}) + 0.6(\text{NGR} \times A_{\text{gross}})$$

The NGR may be calculated in accordance with either the counterparty-by-counterparty approach or the aggregate approach.

Under the counterparty-by-counterparty approach, the NGR is the ratio of the net current exposure for a netting contract to the gross current exposure of the netting contract. The gross current exposure is the sum of the current exposures of all individual contracts subject to the netting contract calculated in accordance with section 4060.3.5.3.13.1. Net negative mark-to-market values for individual netting contracts with the same counterparty may not be used to offset net positive mark-to-market values for other netting contracts with the same counterparty.

Under the aggregate approach, the NGR is the ratio of the sum of all the net current exposures for qualifying bilateral netting contracts to the sum of all the gross current exposures for those netting contracts (each gross current exposure is calculated in the same manner as in section 4060.3.5.3.13.1 (counterparty-by-counterparty approach)). Net negative mark-to-market values for individual counterparties may not be used to offset net positive current exposures for other counterparties.

A banking organization must consistently use either the counterparty-by-counterparty approach or the aggregate approach to calculate the NGR. Regardless of the approach used, the NGR should be applied individually to each qualifying bilateral netting contract to determine the adjusted add-on for that netting contract.

In the event a netting contract covers contracts that are normally excluded from the risk-based ratio calculation—for example, exchange-rate contracts with an original maturity of 14 or fewer calendar days or instruments traded on exchanges that require daily payment of cash-variation margin—an institution may elect to either include or exclude all mark-to-market values of such contracts when determining net current exposure, provided the method chosen is applied consistently.

Examiners are to review the netting of off-

53. For purposes of calculating potential future credit exposure to a netting counterparty for foreign-exchange contracts and other similar contracts in which notional principal is equivalent to cash flows, total notional principal is defined as the net receipts falling due on each value date in each currency.

balance-sheet derivative contractual arrangements used by banking organizations when calculating or verifying risk-based capital ratios to ensure that the positions of such contracts are reported gross unless the net positions of those contracts reflect netting arrangements that comply with the netting requirements listed previously.

4060.3.5.3.16 Financial Standby Letters of Credit and Performance Standby Letters of Credit

The determining characteristic of whether a standby letter of credit is financial or performance is the contractual obligation that triggers payment. If the event that triggers payment is financial, such as a failure to pay money, the standby letter of credit should be classified as financial. If the event that triggers payment is performance-related, such as a failure to ship a product or provide a service, the standby letter of credit should be classified as performance. The vast majority of standby letters of credit a bank issues are considered, for risk-based capital purposes, to be financial standby letters of credit. (See SR-95-20 (SUP).)

4060.3.5.3.16.1 Financial Standby Letters of Credit

The risk-based capital guidelines describe a financial standby letter of credit as an irrevocable undertaking by a banking organization to guarantee repayment of a financial obligation. Such a guarantee is considered a direct-credit substitute and is converted to an on-balance-sheet credit-equivalent amount at 100 percent. The resulting credit-equivalent amount is then risk-weighted according to the type of counterparty or, if relevant, to any guarantee or collateral.

Financial standby letters of credit have a higher conversion factor than performance standby letters of credit. This is primarily because, unlike performance standby letters of credit, financial standby letters of credit tend to be drawn down only when the account party's financial condition has deteriorated.

A standby letter of credit guaranteeing the performance of a contractual obligation to pay money is viewed as a financial letter of credit. For example, a standby letter of credit backing a purchaser's contractual obligation to pay for

delivered goods is a financial guarantee backing the purchaser's credit standing for the sale. It would not be viewed as a performance letter of credit guaranteeing the purchaser's performance to make payment under the contract.

A failure to perform a contractual obligation involving the payment of money can arise in a variety of situations, for example, failure to pay insurance premiums or deductibles, failure to pay insurance claims, failure to pay workers' compensation obligations, or failure to pay for (or arrange) cleanup in the event the account party's operations cause environmental damage. In each instance, the triggering event is the failure to pay money under a contractual obligation. A standby letter of credit guaranteeing payment in the event the account party fails to perform any of these contractual financial obligations or other circumstances should be treated as a financial standby letter of credit and converted to an on-balance-sheet credit-equivalent amount at 100 percent.

4060.3.5.3.16.2 Performance Standby Letters of Credit

A performance standby letter of credit is an irrevocable undertaking by the organization to make payment in the event the customer fails to perform a nonfinancial contractual obligation. This type of letter of credit is considered a transaction-related contingency and is converted to an on-balance-sheet credit-equivalent amount at 50 percent. The resulting credit-equivalent amount is then risk-weighted according to the type of counterparty or, if relevant, to any guarantee or collateral.

4060.3.5.3.17 Credit Derivatives

For purposes of risk-based capital, credit derivatives generally are to be treated as off-balance-sheet direct-credit substitutes. They are arrangements that allow one party (the "protection purchaser") to transfer the credit risk of an asset, which it often actually owns, to another party (the "protection provider").⁵⁴ The value of a credit derivative is dependent, at least in part, on the credit performance of the "reference asset."

The notional amount of the contract should be converted at 100 percent to determine the credit-equivalent amount to be included in risk-

⁵⁴ Credit derivatives that are held in a banking organization's (a bank's or bank holding company's) trading account are subject to the market-risk rules.

weighted assets of the guarantor.⁵⁵ A banking organization providing a guarantee through a credit-derivative transaction should assign its credit exposure to the risk category appropriate to the obligor of the reference asset or any collateral. On the other hand, a banking organization that owns the underlying asset upon which effective credit protection has been acquired through a credit derivative may under certain circumstances assign the unamortized portion of the underlying asset to the risk category appropriate to the guarantor (for example, to the 20 percent risk category if the guarantor is a bank or, if a bank holding company, to the 100 percent risk-weight category).

Whether the credit derivative is considered an eligible guarantee for purposes of risk-based capital depends on the *degree of credit protection* actually provided, which may be limited depending on the terms of the arrangement. For example, a relatively restrictive definition of a default event or a materiality threshold that requires a comparably high percentage of loss to occur before the guarantor is obliged to pay could effectively limit the amount of credit risk actually transferred in the transaction. If the terms of the credit-derivative arrangement significantly limit the degree of risk transference, then the beneficiary bank cannot reduce the risk weight of the “protected” asset to that of the guarantor. On the other hand, even if the transfer of credit risk is limited, a banking organization providing limited credit protection through a credit derivative should hold appropriate capital against the underlying exposure while the organization is exposed to the credit risk of the reference asset.

Banking organizations providing a guarantee through a credit derivative may mitigate the credit risk associated with the transaction by entering into an offsetting credit derivative with another counterparty, a so-called “back-to-back” position. Organizations that have entered into such a position may treat the first credit derivative as guaranteed by the offsetting transaction for risk-based capital purposes. Accordingly, the notional amount of the first credit derivative may be assigned to the risk category appropriate to the counterparty providing credit protection through the offsetting credit-

derivative arrangement (for example, to the 20 percent risk category if the counterparty is an OECD bank).

In some instances, the reference asset in the credit-derivative transaction may not be identical to the underlying asset for which the beneficiary has acquired credit protection. For example, a credit derivative used to offset the credit exposure of a loan to a corporate customer may use a publicly traded corporate bond of the customer as the reference asset, whose credit quality serves as a proxy for the on-balance-sheet loan. In such a case, the underlying asset will still generally be considered guaranteed for capital purposes as long as both the underlying asset and the reference asset are obligations of the same legal entity and have the same level of seniority in bankruptcy. In addition, banking organizations offsetting credit exposure in this manner would be obligated to demonstrate to examiners that there is a high degree of correlation between the two instruments; the reference instrument is a reasonable and sufficiently liquid proxy for the underlying asset so that the instruments can be reasonably expected to behave similarly in the event of default; and, at a minimum, the reference asset and underlying asset are subject to mutual cross-default provisions. A banking organization that uses a credit derivative, which is based on a reference asset that differs from the protected underlying asset, must document the credit derivative being used to offset credit risk and must link it directly to the asset or assets whose credit risk the transaction is designed to offset. The documentation and the effectiveness of the credit-derivative transaction are subject to examiner review. Banking organizations providing credit protection through such arrangements must hold capital against the risk exposures that are assumed.

4060.3.5.3.18 Credit Derivatives Used to Synthetically Replicate Collateralized Loan Obligations

Credit derivatives can be used to synthetically replicate collateralized loan obligations (CLOs). Banking organizations (BOs) can use CLOs and their synthetic variants to manage their balance sheets and, in some instances, transfer credit risk to the capital markets. Such transactions allow economic capital to be more efficiently allocated, resulting in, among other things, improved shareholders' returns. Supervisors and

55. Guarantor banks or bank holding companies that have made cash payments representing depreciation on reference assets may deduct such payments from the notional amount when computing credit-equivalent amounts for capital purposes. For example, if a guarantor bank or bank holding company makes a depreciation payment of \$10 on a \$100 notional total-rate-of-return swap, the credit-equivalent amount would be \$90.

examiners need to fully understand these complex structures, and identify the relative degree of transference and retention of the securitized portfolio's credit risk. They must also determine whether the BO's regulatory risk-based and leverage capital is adequate given the retained credit exposures.⁵⁶

A CLO is an asset-backed security that is usually supported by a variety of assets, including whole commercial loans, revolving credit facilities, letters of credit, banker's acceptances, or other asset-backed securities. In a typical CLO transaction, the sponsoring banking organization (SBO) transfers the loans and other assets to a bankruptcy-remote special-purpose vehicle (SPV), which then issues asset-backed securities consisting of one or more classes of debt. This type of transaction represents a so-called cash-flow CLO that enables the SBO to reduce its leverage and risk-based capital requirements, improve its liquidity, and manage credit concentrations.

The first synthetic CLO (issued in 1997) used credit-linked notes (CLNs).⁵⁷ Rather than transferring assets to the SPV, the sponsoring bank issued CLNs to the SPV, individually referencing the payment obligation of a particular company or "reference obligor." The notional amount of the CLNs issued equaled the dollar amount of the reference assets the sponsor was hedging on its balance sheet. Other structures have evolved that use credit-default swaps to transfer credit risk and create different levels of risk exposure but that hedge only a portion of the notional amount of the overall reference portfolio.⁵⁸

Traditional CLO structures usually transfer assets into the SPV. In synthetic securitizations, the underlying exposures that make up the reference portfolio remain in the BO's banking book.⁵⁹ The credit risk is transferred into the

SPV through credit-default swaps or CLNs. The BO is thus able to maintain client confidentiality and avoid sensitive client-relationship issues that arise from loan-transfer-notification requirements, loan-assignment provisions, and loan-participation restrictions

Corporate credits are assigned to the 100 percent risk-weighted asset category for risk-based capital calculation purposes. In the case of high-quality, investment-grade corporate exposures, the associated 8 percent capital requirement may exceed the economic capital that the SBO sets aside to cover the credit risk of the transaction. Therefore, one of the apparent motivations behind CLOs and other securitizations is to more closely align the SBO's regulatory capital requirements with the economic capital required by the market.

Synthetic CLOs can raise questions about their capital treatment when calculating the risk-based and leverage capital ratios. Capital treatments for three synthetic transactions follow. They are discussed from the perspective of the investors and the SBOs.

4060.3.5.3.18.1 Transaction 1—Entire Notional Amount of the Reference Portfolio Is Hedged

In the first type of synthetic securitization, the SBO, through a synthetic CLO, hedges the entire notional amount of a reference asset portfolio. An SPV acquires the credit risk on a reference portfolio by purchasing CLNs issued by the SBO. The SPV funds the purchase of the CLNs by issuing a series of notes in several tranches to third-party investors. The investor notes are in effect collateralized by the CLNs. Each CLN represents one obligor and the BO's credit-risk exposure to that obligor, which could take the form of bonds, commitments, loans, and counterparty exposures. Since the noteholders are exposed to the full amount of credit risk associated with the individual reference obligors, all of the credit risk of the reference portfolio is shifted from the SBO to the capital markets. The dollar amount of notes issued to investors equals the notional amount of the reference portfolio. In the example shown in figure 1, this amount is \$1.5 billion.

If the obligor linked to a CLN in the SPV defaults, the SBO will call the individual CLN and redeem it based on the repayment terms specified in the note agreement. The term of each CLN is set so that the credit exposure (to which it is linked) matures before the maturity of the CLN, which ensures that the CLN will be

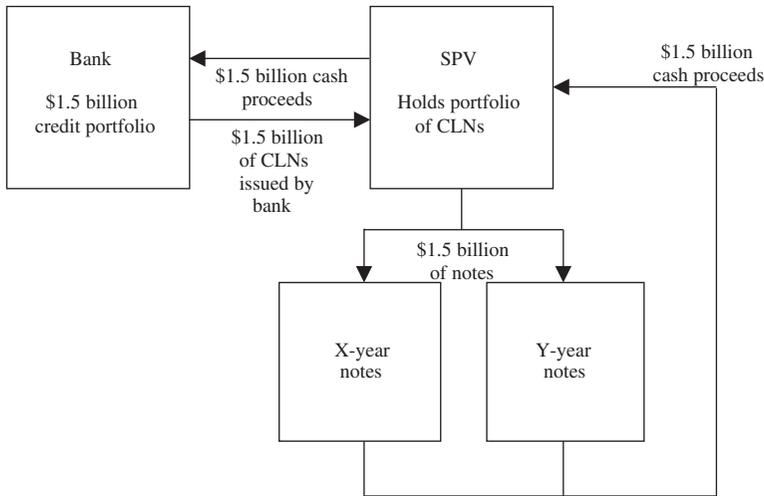
56. See SR-99-32 and its attached November 15, 1999, FRB-OCC capital interpretation on synthetic collateralized loan obligations.

57. CLNs are obligations whose principal repayment is conditioned upon the performance of a referenced asset or portfolio. The assets' performance may be based on a variety of measures, such as movements in price or credit spread, or the occurrence of default.

58. A credit-default swap is similar to a financial standby letter of credit in that the BO writing the swap provides, for a fee, credit protection against credit losses associated with a default on a specified reference asset or pool of assets.

59. "Banking book" refers to nontrading accounts. See the "trading account" definition in the Glossary for the instructions to the Consolidated Financial Statements for Bank Holding Companies, FR Y-9C.

Figure 1—Transaction 1



in place for the full term of the exposure to which it is linked.

An investor in the notes issued by the SPV is exposed to the risk of default of the underlying reference assets, as well as to the risk that the SBO will not repay principal at the maturity of the notes. Because of the linkage between the credit quality of the SBO and the issued notes, a downgrade of the sponsor's credit rating most likely will result in the notes also being downgraded. Thus, a BO investing in this type of synthetic CLO should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the issuing entity.

For purposes of risk-based capital, the SBOs may treat the cash proceeds from the sale of CLNs that provide protection against underlying reference assets as cash collateralizing these assets.⁶⁰ This treatment would permit the reference assets, if carried on the SBO's books, to be assigned to the zero percent risk category to the extent that their notional amount is fully collateralized by cash. This treatment may be applied even if the cash collateral is transferred directly into the general operating funds of the BO and is not deposited in a segregated account. The synthetic CLO would not confer any benefits to

the SBO for purposes of calculating its tier 1 leverage ratio, however, because the reference assets remain on the organization's balance sheet.

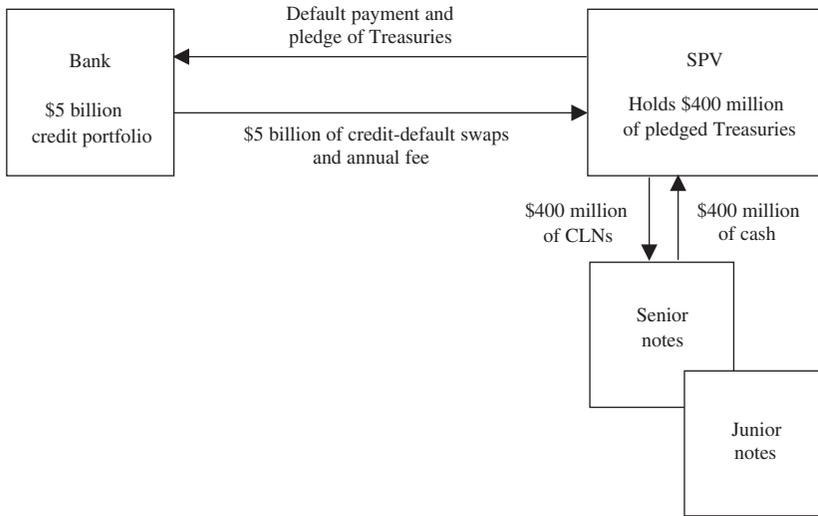
4060.3.5.3.18.2 Transaction 2—High-Quality, Senior Risk Position in the Reference Portfolio Is Retained

In the second type of synthetic CLO transaction, the SBO hedges a portion of the reference portfolio and retains a high-quality, senior risk position that absorbs only those credit losses in excess of the junior-loss positions. For some noted synthetic CLOs, the SBO used a combination of credit-default swaps and CLNs to transfer to the capital markets the credit risk of a designated portfolio of the organization's credit exposures. Such a transaction allows the SBO to allocate economic capital more efficiently and to significantly reduce its regulatory capital requirements.

In the structure illustrated in figure 2, the SBO purchases default protection from an SPV for a specifically identified portfolio of banking-book credit exposures, which may include letters of credit and loan commitments. The credit risk on the identified reference portfolio (which continues to remain in the sponsor's banking book) is transferred to the SPV through the use of credit-default swaps. In exchange for the

60. The CLNs should not contain terms that would significantly limit the credit protection provided against the underlying reference assets, for example, a materiality threshold that requires a relatively high percentage of loss to occur before CLN payments are adversely affected, or a structuring of CLN post-default payments that does not adequately pass through credit-related losses on the reference assets to investors in the CLNs.

Figure 2—Transaction 2



credit protection, the SBO pays the SPV an annual fee. The default swaps on each of the obligors in the reference portfolio are structured to pay the average default losses on all senior unsecured obligations of defaulted borrowers. To support its guarantee, the SPV sells CLNs to investors and uses the cash proceeds to purchase U.S. government Treasury notes. The SPV then pledges the Treasuries to the SBO to cover any default losses.⁶¹ The CLNs are often issued in multiple tranches of differing seniority and in an aggregate amount that is significantly less than the notional amount of the reference portfolio. The amount of notes issued typically is set at a level sufficient to cover some multiple of expected losses, but well below the notional amount of the reference portfolio being hedged.

There may be several levels of loss in this type of synthetic securitization. The first-loss position may consist of a small cash reserve, sufficient to cover expected losses. The cash reserve accumulates over a period of years and is funded from the excess of the SPV's income (that is, the yield on the Treasury securities plus the credit-default-swap fee) over the interest paid to investors on the notes. The investors in the SPV assume a second-loss position through their investment in the SPV's senior and junior

notes, which tend to be rated AAA and BB, respectively. Finally, the SBO retains a high-quality, senior risk position that would absorb any credit losses in the reference portfolio that exceed the first- and second-loss positions.

Typically, no default payments are made until the maturity of the overall transaction, regardless of when a reference obligor defaults. While operationally important to the SBO, this feature has the effect of ignoring the time value of money. Thus, the Federal Reserve expects that when the reference obligor defaults under the terms of the credit derivative and when the reference asset falls significantly in value, the SBO should, in accordance with generally accepted accounting principles, make appropriate adjustments in its regulatory reports to reflect the estimated loss that takes into account the time value of money.

For risk-based capital purposes, the BOs investing in the notes must assign them to the risk weight appropriate to the underlying reference assets.⁶² The SBO must include in its risk-weighted assets its retained senior exposure in the reference portfolio, to the extent these underlying assets are held in its banking book. The portion of the reference portfolio that is collateralized by the pledged Treasury securities

61. The names of corporate obligors included in the reference portfolio may be disclosed to investors in the CLNs.

62. Under this type of transaction, if a structure exposes investing BOs to the creditworthiness of a substantive issuer, for example, the SBO, then the investing BOs should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the SBO.

may be assigned a zero percent risk weight. Unless the SBO meets the stringent minimum conditions for transaction 2 outlined in the subsection "Minimum Conditions," the remainder of the portfolio should be risk-weighted according to the obligor of the exposures.

When the SBO has virtually eliminated its credit-risk exposure to the reference portfolio through the issuance of CLNs, and when the other minimum requirements are met, the SBO may assign the uncollateralized portion of its retained senior position in the reference portfolio to the 20 percent risk weight. However, to the extent that the reference portfolio includes loans and other on-balance-sheet assets, the SBO would not realize any benefits in the determination of its leverage ratio.

In addition to the three stringent minimum conditions, the Federal Reserve may impose other requirements, as it deems necessary to ensure that an SBO has virtually eliminated all of its credit exposure. Furthermore, the Federal Reserve retains the discretion to increase the risk-based capital requirement assessed against the retained senior exposure in these structures, if the underlying asset pool deteriorates significantly.

Federal Reserve staff will make a case-by-case determination, based on a qualitative review, as to whether the senior retained portion of an SBO's synthetic securitization qualifies for the 20 percent risk weight. The SBO must be able to demonstrate that virtually all the credit risk of the reference portfolio has been transferred from the banking book to the capital markets. As they do when BOs are engaging in more traditional securitization activities, examiners must carefully evaluate whether the SBO is fully capable of assessing the credit risk it retains in its banking book and whether it is adequately capitalized given its residual risk exposure. The Federal Reserve will require the SBO to maintain higher levels of capital if it is not deemed to be adequately capitalized given the retained residual risks. In addition, an SBO involved in synthetic securitizations must adequately disclose to the marketplace the effect of its transactions on its risk profile and capital adequacy.

The Federal Reserve may consider an SBO's failure to require the investors in the CLNs to absorb the credit losses that they contractually agreed to assume an unsafe and unsound banking practice. In addition, such a failure generally would constitute "implicit recourse" or support to the transaction, which result in the SBO's losing preferential capital treatment on its retained senior position.

If an SBO of a synthetic securitization does

not meet the stringent minimum conditions, it may still reduce the risk-based capital requirement on the senior risk position retained in the banking book by transferring the remaining credit risk to a third-party OECD bank through the use of a credit derivative. Provided the credit-derivative transaction qualifies as a guarantee under the risk-based capital guidelines, the risk weight on the senior position may be reduced from 100 percent to 20 percent. SBOs may not enter into nonsubstantive transactions that transfer banking-book items into the trading account to obtain lower regulatory capital requirements.⁶³

4060.3.5.3.18.3 Minimum Conditions

The following stringent minimum conditions are those that the SBOs must meet to use the synthetic securitization capital treatment for transaction 2. The Federal Reserve may impose additional requirements or conditions as deemed necessary to ascertain that an SBO has sufficiently isolated itself from the credit-risk exposure of the hedged reference portfolio.

Condition 1—Demonstration of transfer of virtually all the risk to third parties. Not all transactions structured as synthetic securitizations transfer the level of credit risk needed to receive the 20 percent risk weight on the retained senior position. To demonstrate that a transfer of virtually all of the risk has been achieved, SBOs must—

1. produce credible analyses indicating a transfer of virtually all the credit risk to substantive third parties;
2. ensure the absence of any early-amortization or other credit performance-contingent clauses;⁶⁴
3. subject the transaction to market discipline

63. For instance, a lower risk weight would not be applied to a nonsubstantive transaction in which the SBO (1) enters into a credit-derivative transaction to pass the credit risk of the senior retained portion held in its banking book to an OECD bank, and then (2) enters into a second credit-derivative transaction with the same OECD bank, in which it reassumes into its trading account the credit risk initially transferred.

64. Early-amortization clauses may generally be defined as features that are designed to force a wind-down of a securitization program and rapid repayment of principal to asset-backed securities investors if the credit quality of the underlying asset pool deteriorates significantly.

- through the issuance of a substantive amount of notes or securities to the capital markets;
4. have notes or securities rated by a nationally recognized credit rating agency;
 5. structure a senior class of notes that receives the highest possible investment-grade rating, for example, AAA, from a nationally recognized credit rating agency;
 6. ensure that any first-loss position retained by the SBO in the form of fees, reserves, or other credit enhancement—which effectively must be deducted from capital—is no greater than a reasonable estimate of expected losses on the reference portfolio; and
 7. ensure that the SBO does not reassume any credit risk beyond the first-loss position through another credit derivative or any other means.

Condition 2—Demonstration of ability to evaluate remaining banking-book risk exposures and provide adequate capital support. To ensure that the SBO has adequate capital for the credit risk of its unhedged exposures, it is expected to have adequate systems that fully account for the effect of these transactions on its risk profiles and capital adequacy. In particular, the SBO's systems should be capable of fully differentiating the nature and quality of the risk exposures it transfers from the nature and quality of the risk exposures it retains. Specifically, to gain capital relief SBOs are expected to—

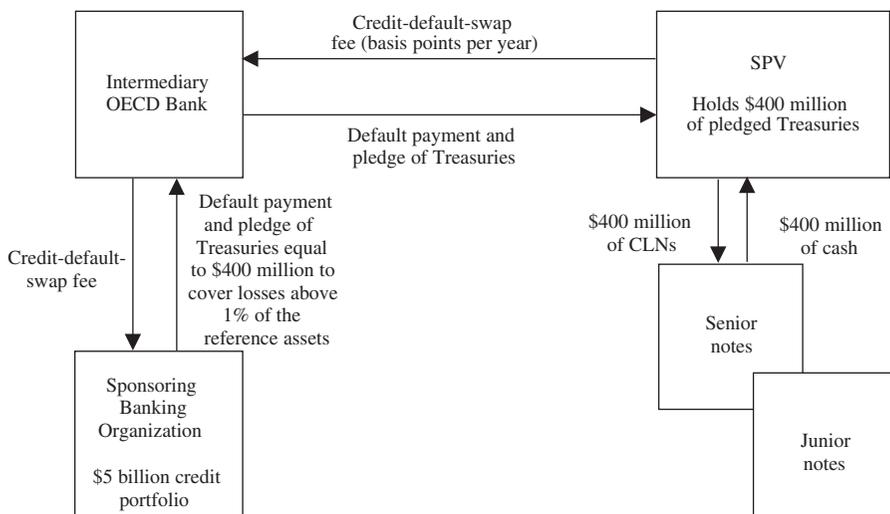
1. have a credible internal process for grading credit-risk exposures, including the following:
 - a. adequate differentiation of risk among risk grades
 - b. adequate controls to ensure the objectivity and consistency of the rating process
 - c. analysis or evidence supporting the accuracy or appropriateness of the risk-grading system;
2. have a credible internal economic capital-assessment process that defines the SBO to be adequately capitalized at an appropriate insolvency probability and that readjusts, as necessary, its internal economic capital requirements to take into account the effect of the synthetic securitization transaction. In addition, the process should employ a sufficiently long time horizon to allow necessary adjustments in the event of significant losses. The results of an exercise demonstrating that the organization is adequately capitalized

3. evaluate the effect of the transaction on the nature and distribution of the nontransferred banking-book exposures. This analysis should include a comparison of the banking book's risk profile and economic capital requirements before and after the transaction, including the mix of exposures by risk grade and by business or economic sector. The analysis should also identify any concentrations of credit risk and maturity mismatches. Additionally, the SBO must adequately manage and control the forward credit exposure that arises from any maturity mismatch. The Federal Reserve retains the flexibility to require additional regulatory capital if the maturity mismatches are substantive enough to raise a supervisory concern. Moreover, as stated above, the SBO must demonstrate that it meets its internal economic capital requirement subsequent to the completion of the synthetic securitization; and
4. perform rigorous and robust forward-looking stress testing on nontransferred exposures (remaining banking-book loans and commitments), transferred exposures, and exposures retained to facilitate transfers (credit enhancements). The stress tests must demonstrate that the level of credit enhancement is sufficient to protect the SBO from losses under scenarios appropriate to the specific transaction.

Condition 3—Provide adequate public disclosures of synthetic CLO transactions regarding their risk profile and capital adequacy. In their 10-K and annual reports, SBOs must adequately disclose to the marketplace the accounting, economic, and regulatory consequences of synthetic CLO transactions. In particular, SBOs are expected to disclose—

1. the notional amount of loans and commitments involved in the transaction;
2. the amount of economic capital shed through the transaction;
3. the amount of reduction in risk-weighted assets and regulatory capital resulting from the transaction, both in dollar terms and in terms of the effect in basis points on the risk-based capital ratios; and
4. the effect of the transaction on the distribution and concentration of risk in the retained portfolio by risk grade and sector.

Figure 3—Transaction 3



4060.3.5.3.18.4 Transaction 3—First-Loss Position Is Retained

In the third type of synthetic transaction, the SBO may retain a subordinated position that absorbs the credit risk associated with a first loss in a reference portfolio. Furthermore, through the use of credit-default swaps, the SBO may pass the second- and senior-loss positions to a third-party entity, most often an OECD bank. The third-party entity, acting as an intermediary, enters into offsetting credit-default swaps with an SPV, thus transferring its credit risk associated with the second-loss position to the SPV.⁶⁵ The SPV then issues CLNs to the capital markets for a portion of the reference portfolio and purchases Treasury collateral to cover some multiple of expected losses on the underlying exposures.

Two alternative approaches could be used to determine how the SBO should treat the overall transaction for risk-based capital purposes. The first approach employs an analogy to the low-level capital rule for assets sold with recourse. Under this rule, a transfer of assets with recourse that contractually is limited to an amount less than the effective risk-based capital requirements for the transferred assets is assessed a total capital charge equal to the maximum amount of loss possible under the recourse obligation. If this rule applied to an SBO retaining a 1 percent first-loss position on a synthetically securitized

portfolio that would otherwise be assessed 8 percent capital, the SBO would be required to hold dollar-for-dollar capital against the 1 percent first-loss risk position. The SBO would not be assessed a capital charge against the second- and senior-risk positions.⁶⁶

The second approach employs a literal reading of the capital guidelines to determine the SBO's risk-based capital charge. In this instance, the 1 percent first-loss position retained by the SBO would be treated as a guarantee, that is, a direct-credit substitute, which would be assessed an 8 percent capital charge against its face value of 1 percent. The second-loss position, which is collateralized by Treasury securities, would be viewed as fully collateralized and subject to a zero percent capital charge. The senior-loss position guaranteed by the intermediary bank would be assigned to the 20 percent risk category appropriate to claims guaranteed by OECD banks.⁶⁷

65. Because the credit risk of the senior position is not transferred to the capital markets but remains with the intermediary bank, the SBO should ensure that its counterparty is of high credit quality, for example, at least investment grade.

66. The SBO would not realize any benefits in the determination of its leverage ratio since the reference assets remain on the SBO's balance sheet.

67. If the intermediary is a BO, then it could place both

The second approach may result in a higher risk-based capital requirement than the dollar-for-dollar capital charge imposed by the first approach, depending on whether the reference portfolio consists primarily of loans to private obligors or undrawn long-term commitments. The latter generally have an effective risk-based capital requirement one-half of the requirement for loans because these commitments are converted to an on-balance-sheet credit-equivalent amount using the 50 percent conversion factor. If the reference pool consists primarily of drawn loans to private obligors, then the capital requirement on the senior-loss position would be significantly higher than if the reference portfolio contained only undrawn long-term commitments. As a result, the capital charge for the overall transaction could be greater than the dollar-for-dollar capital requirement set forth in the first approach.

SBOs will be required to hold capital against a retained first-loss position in a synthetic securitization equal to the higher of the two capital charges resulting from application of the first and second approaches, as discussed above. Further, although the SBO retains only the credit risk associated with the first-loss position, it still should continue to monitor all the underlying credit exposures of the reference portfolio to detect any changes in the credit-risk profile of the counterparties. This is important to ensure that the SBO has adequate capital to protect against unexpected losses. Examiners should determine whether the SBO has the capability to assess and manage the retained risk in its credit portfolio after the synthetic securitization is completed. For risk-based capital purposes, BOs investing in the notes must assign them to the risk weight appropriate to the underlying reference assets.⁶⁸

sets of credit-default swaps in its trading account and, if subject to the Federal Reserve's market-risk capital rules, use its general market-risk model and, if approved, specific-risk model to calculate the appropriate risk-based capital requirement. If the specific-risk model has not been approved, then the SBO would be subject to the standardized specific-risk capital charge.

68. Under this type of transaction, if a structure exposes investing BOs to the creditworthiness of a substantive issuer, for example, the SBO, then the investing BOs should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the SBO.

4060.3.5.3.19 *Reservation of Authority*

The Federal Reserve reserves its authority to determine, on a case-by-case basis, the appropriate risk weight for assets and credit-equivalent amounts and the appropriate credit-conversion factor for off-balance-sheet items. The Federal Reserve's exercise of this authority may result in a higher or lower risk weight for an asset or credit-equivalent amount, or in a higher or lower credit-conversion factor for an off-balance-sheet item. This reservation of authority explicitly recognizes that the Federal Reserve retains sufficient discretion to ensure that bank holding companies, as they develop novel financial assets, will be treated appropriately under the regulatory capital standards. Under this authority, the Federal Reserve reserves its right to assign risk positions in securitizations to appropriate risk categories on a case-by-case basis, if the credit rating of the risk position is determined to be inappropriate.

4060.3.5.3.20 *Board Exceptions (Reservation of Authority) for Securities Lending*

Securities lent by a bank are treated in one of two ways, depending upon whether the lender is at risk of loss. If a bank, as agent for a customer, lends the customer's securities and does not indemnify the customer against loss, then the transaction is excluded from the risk-based capital calculation. Alternatively, if a bank lends its own securities or, acting as agent for a customer, lends the customer's securities and indemnifies the customer against loss, the transaction is converted at 100 percent and assigned to the risk-weight category appropriate to the obligor, or, if applicable, to any collateral delivered to the lending bank or the independent custodian acting on the lending bank's behalf. When a bank is acting as agent for a customer in a transaction involving the lending or sale of securities that is collateralized by cash delivered to the bank, the transaction is deemed to be collateralized by cash on deposit for purposes of determining the appropriate risk-weight category, provided that (1) any indemnification is limited to no more than the difference between the market value of the securities and (2) the cash collateral received and any reinvestment risk associated with that cash collateral is borne by the customer. See 4060.3.2.2 for the procedures for risk-weighting on- and off-balance-sheet items and the discussion on securities lending in 2140.0.

Certain agency securities-lending arrangements (May 2003 exception for "cash-collateral transactions"). In response to a bank's inquiry, the Board issued a May 14, 2003, interpretation for the risk-based capital treatment of certain European agency securities' lending arrangements in which the bank, acting as agent, lends securities of a client and receives cash collateral from the borrower. The transaction is marked-to-market daily and a positive margin of cash collateral relative to the market value of the securities lent is maintained at all times. If the borrowing counterparty defaults on the securities loaned through, for example, failure to post margin when required, the transaction is immediately terminated and the cash collateral is used by the bank to repurchase in the market the securities lent, in order to restore them to the client. The bank indemnifies its client against the risk that, in the event of counterparty default, the amount of cash collateral may be insufficient to repurchase the amount of securities lent. Thus, the indemnification is limited to the difference between the value of the cash collateral and the repurchase price of the replacement securities. In addition, the bank, again acting as agent, reinvests, on the client's behalf, the cash collateral received from the borrower. The reinvestment transaction takes the form of a cash loan to a counterparty that is fully collateralized by government or corporate securities (through, for example, a reverse-repurchase agreement). Like the first transaction, the reinvestment transaction is subject to daily marking-to-market and remargining and is immediately terminable in the event of counterparty default. The bank issues an indemnification to the client against the reinvestment risk, which is similar to the indemnification the bank gives on the original securities-lending transaction.

The Federal Reserve Board's current risk-based capital guidelines treat indemnifications issued in connection with agency securities lending activities as off-balance-sheet guarantees that are subject to capital charges. Under the guidelines, the bank's first indemnification would receive the risk weight of the securities-borrowing counterparty because of the bank's indemnification of the client's reinvestment risk on the cash collateral. (See 12 CFR 208 and 225, appendix A, section III.D.1.c.) The bank's second indemnification would receive the lower of the risk weight of the reverse-repurchase counterparty or the collateral, unless it was fully collateralized with margin by OECD government securities, which would qualify for a zero percent risk weight. (See 12 CFR 208 and 225, appendix A, sections III.D.1.a. and b.)

The bank inquired about the possibility of assigning a zero percent risk weight for both indemnifications, given the low risk they pose to the bank. The Board approved an exception to its risk-based capital guidelines for the bank's agency securities-lending transactions. The Board approved this exception under the reservation of authority provision contained in the guidelines. This provision permits the Board, on a case-by-case basis, to determine the appropriate risk weight for any asset or off-balance-sheet item that imposes risks on a bank that are incommensurate with the risk weight otherwise specified in the guidelines. (See 12 CFR 208 and 225, appendix A, section III.A.)

This exception applies to the bank's agency securities-lending transactions collateralized by cash where the bank indemnifies its client against (1) the risk that, in the event of default by the securities borrower, the amount of cash collateral may be insufficient to repurchase the amount of securities lent and (2) the reinvestment risk associated with lending the cash collateral in a transaction fully collateralized by securities (for example, in a reverse-repurchase transaction).

The capital treatment the Board approved for these transactions relies upon an economic measurement of the amount of risk exposure the bank has to each of its counterparties. Under this approved approach, the bank does not use the notional amount of underlying transactions that are subject to client indemnifications as the exposure amount for risk-based capital purposes. Rather, the bank must use an economic exposure amount that takes into account the market value of collateral and the market price volatilities of (1) the instruments delivered by the bank to the counterparty and (2) the instruments received by the bank from the counterparty. This approach builds on best practices of banks for measuring their credit exposure amounts for purposes of managing internal single-borrower exposure limits, as well as upon existing concepts incorporated in the Basel Accord and the Board's risk-based capital and market risk rules. The bank, under this exception, is required to determine an unsecured loan equivalent amount for each of the counterparties to which, as agent, the bank lends securities collateralized by cash or lends cash collateralized by securities. As described below, the unsecured loan equivalent amount will be assigned the risk weight appropriate to the counterparty.

To determine the unsecured loan equivalent amount, the bank must add together its current

exposure to the counterparty and a measure for potential future exposure (PFE) to the counterparty. The current exposure is the sum of the market value of all securities and cash lent to the counterparty under the bank's indemnified arrangements, less the sum of all securities and cash received from the counterparty as collateral under the indemnified arrangements. The PFE calculation is to be based on the market volatilities of the securities lent and the securities received, as well as any foreign exchange rate volatilities associated with any cash or securities lent or received.

The Board considered two methods for incorporating market volatilities into the PFE calculation: (1) the bank's own estimates of those volatilities based on a year's historical observation of market prices with no recognition of correlation effects and (2) a value-at-risk (VaR) type model. The bank was calculating daily, counterparty VaR estimates for its agency lending transactions and it had a VaR model that had been approved for purposes of the Board's market risk rule. The Board determined that the bank could use a VaR model to calculate the PFE for each of its counterparties.

The bank must calculate the VaR using a five-day holding period and a 99th percentile one-tailed confidence interval based on market price data over a one-year historical observation period. The data set used should be updated no less frequently than once every three months and should be reassessed whenever market prices are subject to material changes. For each counterparty, the bank is required to calculate daily an unsecured loan equivalent amount, including the VaR PFE component. These calculations will be subject to supervisory review to ensure they are in line with the quarter-end calculations used to determine regulatory capital requirements.

To qualify for the capital treatment outlined above, the securities-lending and cash loan transactions covered by the bank's indemnification must meet the following conditions:

1. The transactions are fully collateralized.
2. Any securities lent or taken as collateral are eligible for inclusion in the trading book and are liquid and readily marketable.
3. Any securities lent or taken as collateral are marked-to-market daily.
4. The transactions are subject to a daily margin maintenance requirement.

Further, the transactions must be executed

under a bilateral netting agreement or an equivalent arrangement. These arrangements must (1) provide the non-defaulting party the right to promptly terminate and close-out all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty; (2) provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under the agreement so that a single net amount is owed by one party to the other; (3) allow for the prompt liquidation or setoff of collateral upon the occurrence of an event of default; (4) be conducted, together with the rights arising from the conditions required in provisions 1 and 3 above, under documentation that is legally binding on all parties and legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy; and (5) be conducted under documentation for which the bank has completed sufficient legal review to verify it meets provision 4 above and for which the bank has a well-founded legal basis for reaching this conclusion.

With regard to the counterparty VaR model that the bank uses, the bank is required to conduct regular and rigorous backtesting procedures, which are subject to supervisory review, to ensure the validity of the correlation factors used by the bank and the stability of these factors over time. The bank was not subject to a formal backtesting procedure requirement at the time the letter was issued. However, if supervisory review determines that the bank's counterparty VaR model or its backtesting procedures have material deficiencies and the bank does not take appropriate and expeditious steps to rectify those deficiencies, supervisors may take action to adjust the bank's capital calculations. Such action could range from imposing a multiplier on the VaR estimates of PFE calculated by the bank to disallowing the use of its counterparty VaR model and requiring use of the own-estimates approach to determine the PFE component of the unsecured loan equivalent amounts.

The capital treatment that the Board approved in the letter has been, and will be made, available to similarly situated institutions that request and receive Board approval for such treatment.

Certain agency securities-lending arrangements (August 2006 exception for "securities-collateral transactions"). In response to an inquiry made by a bank, a Board interpretation issued on August 15, 2006, discussed the regulatory capital treatment of certain securities-

lending transactions. In these transactions, the bank, acting as agent for its clients, lends its clients' securities and receives liquid securities collateral in return (the securities-collateral transactions).⁶⁹ Each securities loan is marked to market daily, and the bank calls for additional margin as needed to maintain a positive margin of collateral relative to the market value of the securities lent at all times. The bank also agrees to indemnify its clients against the risk that, in the event of borrower default, the market value of the securities collateral is insufficient to repurchase the amount of securities lent.

If the borrower were to default, the bank would be in a position to terminate a securities-collateral transaction and sell the collateral in order to purchase securities to replace the securities that were originally lent. The bank's exposure under a securities-collateral transaction would be limited to the difference between the purchase price of the replacement securities and the market value of the securities collateral.

The bank requested that the Federal Reserve Board approve another exception to the capital guidelines that would permit the bank to measure its exposure amounts for risk-based capital purposes with respect to the securities-collateral transactions under the methodology of the bank's prior May 14, 2003, approval (the prior approval). Again, the Board determined that, under its current risk-based capital guidelines, the capital charges for these securities-lending arrangements would exceed the amount of economic risk posed to the bank, which would result in capital charges that would be significantly out of proportion to the risk posed. The Board therefore approved an August 15, 2006, exception to its risk-based capital guidelines according to the prior approval, allowing the bank to compute its regulatory capital for these transactions using a loan-equivalent methodology. In so doing, the bank would assign the risk weight of the counterparty to the exposure amount of all such transactions with the counterparty. Specifically, the Board granted the bank its request to use an unsecured loan-equivalent amount (calculated as current exposure plus a VaR-modeled PFE) for the securities-collateral transactions for risk-based capital purposes. The Board approved the exception under the reservation-of-authority provision contained in its capital guidelines.

4060.3.5.3.21 (Reservation of Authority) Regulation T Margin Debits—Regulation T Margin Loans

A BHC requested that the Board grant it an exception to its risk-based capital guidelines (12 C.F.R. 225, appendix A) so that it could assign a lower risk weight to the Regulation T margin debits (Reg. T margin loans) held by a registered U.S. broker-dealer subsidiary. The guidelines require that a 100 percent risk weight be assigned to Reg. T margin loans, which results in a risk-based capital requirement of 8 percent.

The BHC contended that a lower risk weight for Reg. T margin loans would more closely align the regulatory capital requirement for such loans to their credit risk, given their high level of collateralization and the company's long history of low loss rates on such loans. It noted that its internal economic capital charge for credit risk on Reg. T margin loans is de minimis. It stated also that a lower risk weight for Reg. T margin loans would be appropriate to, among other things, reduce competitive disadvantages that the BHC (through its U.S. broker-dealer subsidiary) has relative to U.S. broker-dealers that are not consolidated subsidiaries of BHCs and to non-U.S. banks and broker-dealers.

A margin account at a broker-dealer registered with the Securities and Exchange Commission (SEC) is a leveraged account, through which securities can be purchased, sold short, carried, or traded using a loan from the broker-dealer and a deposit of cash or securities by the customer. The amount of leverage available to a customer is limited by (1) the Board's Regulation T (12 C.F.R. 220), (2) the margin-maintenance rules of the Financial Industry Regulatory Authority (FINRA) (NYSE Rule 431 and NASD Rule 2520), and (3) the lender's internal margin-maintenance requirements.^{69a}

^{69a} For example, a customer who purchases \$100 of equity securities in a margin account may borrow only \$50 against those securities from the broker-dealer under Regulation T. If this transaction is the only one in the margin account, the loan will be 200 percent collateralized at the time of purchase because the market value of the securities is twice that of the margin loan. If, on a daily basis, the equity in the account falls below the required NYSE margin maintenance of 25 percent—that is, if the value of the collateral falls below 133 percent of the loan—the customer is required to post additional collateral (either cash or securities) to eliminate the margin deficiency. If the customer does not meet the margin call within the required time, the broker-dealer must sell sufficient securities in the account to increase the account equity to the required maintenance level.

⁶⁹ The liquid securities collateral includes government agency, government-sponsored entity, corporate debt or equity, or asset-backed or mortgage-backed securities.

The requesting BHC noted that it applies in most instances (and in all instances when the collateral is equities or non-investment-grade bonds) internal margin-maintenance requirements that exceed those in NYSE Rule 431.^{69b} It represented that its Reg. T margin loans are typically collateralized by liquid and readily marketable securities, which generally can be terminated on demand at any time. The BHC represented also that it marks to market the Reg. T margin loans and associated securities collateral on a daily basis and that it makes daily margin-maintenance calls for any collateral deficiencies. It also concluded that the collateral for a Reg. T margin loan should generally be available for prompt liquidation even in the event of the borrower's bankruptcy.

The BHC's request contended that other domestic and foreign firms—including foreign banking organizations that own U.S. broker-dealers, as well as U.S. broker-dealers and consolidated supervised entities ("CSEs") regulated by the SEC—are currently required to hold either no or de minimis regulatory capital against Reg. T margin loans. It maintained that the much higher regulatory capital requirement that U.S. BHCs incur for Reg. T margin loans places U.S. broker-dealers owned by U.S. BHCs at a disadvantage in competing for this low-risk business.

After carefully considering the request, and subject to the listed conditions below, the Board approved, under certain circumstances, an exception to the guidelines that permits the requesting BHC to apply a 10 percent risk weight to its Reg. T margin loans. The Board approved this exception to the guidelines under the reservation-of-authority provision contained in the guidelines (12 C.F.R. 225, appendix A, III.A). This provision permits the Board, on a case-by-case basis, to determine the appropriate risk weight for any asset or off-balance-sheet item that imposes risks on a BHC that are incommensurate with the risk weight otherwise specified in the guidelines.

To qualify for the capital treatment on an exception basis, Reg. T margin loans must meet the following conditions:

1. The securities collateral for the Reg. T margin loans is liquid and readily marketable;

2. The Reg. T margin loans and associated collateral are marked to market each business day;
3. The Reg. T margin loans are subject to initial margin requirements under Regulation T and daily margin-maintenance requirements under FINRA regulations (NYSE Rule 431) or NASD Rule 2520; and
4. The BHC has a reasonable basis for concluding that it would be able to liquidate the collateral for the Reg. T margin loans without undue delay, even in the case of bankruptcy or insolvency of the borrower.

The Board concluded that this capital treatment for Reg. T margin loans provides a more risk-sensitive treatment for these transactions than their treatment under the guidelines. The (1) combination of initial margin requirements under Regulation T, (2) ongoing margin-maintenance requirements under FINRA regulations, (3) generally higher ongoing margin-maintenance requirements under the BHC's internal policies, (4) the BHC's daily mark-to-market and margin-call policies, (5) the high liquidity of the collateral, (6) the BHC's typical right to terminate the loan at any time, and (7) the BHC's general protection from the automatic stay in bankruptcy makes these loans a low-credit-risk product that warrants a 10 percent risk weight.

The Board noted that this 10 percent risk-weight exception treatment for Reg. T margin loans would be made available to similarly situated institutions that request and receive Board approval for such treatment. BHCs should be aware that the Board may in the future impose a regulatory capital treatment for Reg. T margin loans that differs from the exception. As for this BHC's request, any Board determination will be conditioned on the requesting BHC's compliance with the commitments and representations made to the Board in connection with its request and, as such, may be enforced in proceedings under applicable law. Further, this exception will also consider specific facts and circumstances described in the request and in discussions with Federal Reserve staff. See the Board's legal interpretation issued June 15, 2007, and other similar legal interpretations issued on August 29, September 17, November 5, December 17, and December 18, 2007.

^{69b} Regulation T initial margin requirements and NYSE margin-maintenance requirements for debt securities and options differ from those applicable to equity securities.

4060.3.5.4 Considerations in the Overall Assessment of Capital Adequacy

Examiners are to take into account the follow-

ing factors when assessing the overall capital adequacy of banking organizations.

4060.3.5.4.1 *Unrealized Asset Values*

Banking organizations often have assets on their books that are carried at significant discounts below current market values. This difference between book value (historical cost or acquisition value) and market value of any asset, particularly for banking premises, may represent potential capital to the banking organization. These “unrealized asset values” are *not* included in the risk-based capital calculation. Examiners should take into consideration such unrecognized capital when assessing capital adequacy. Particular attention should be given to the nature of the asset, the reasonableness of its valuation, its marketability, and the likelihood of its sale.

4060.3.5.4.2 *Ineligible Collateral and Guarantees*

The risk-based capital guidelines recognize collateral and guarantees in only a limited number of cases. Other types of collateral and guarantees support the asset mix of banking organizations, particularly within their loan portfolios. Such collateral or guarantees may serve to substantially improve the overall quality of loan portfolios and of other credit exposures and should be considered by examiners when they are arriving at their overall assessment of capital adequacy.

4060.3.5.4.3 *Overall Asset Quality*

The conclusions drawn by banking organizations from calculating their risk-based capital ratios may be significantly different from conclusions drawn by examiners. The main reason for these differences is the assessment of asset quality. Examiners must assess the capital adequacy of banking organizations, taking into account examination or inspection findings, particularly those findings regarding the severity of problem and classified assets and investment or loan-portfolio concentrations, as well as the adequacy of the banking organization's allowance for loan and lease losses.

4060.3.5.4.4 *Interest-Only Strips and Principal-Only Strips*

Interest-only strips (IOs) and principal-only strips (POs) have highly volatile price characteristics as interest rates change, and they are generally not considered appropriate investments for most banking organizations. However, some sophisticated banking organizations may use IOs and POs as hedging vehicles. The Board does not want to discourage the legitimate use of IOs and POs as hedging vehicles. Examiners' assessments of capital adequacy should reflect banking organizations' appropriate use of hedging instruments, including IOs and POs. Banking organizations that have appropriately hedged their interest-rate exposure may be permitted to operate with lower levels of capital than those banking organizations that are vulnerable to interest-rate changes.

4060.3.5.4.5 *Interest-Rate Risk*

Examiners are to continue to scrutinize banking organizations' interest-rate risk exposure carefully and to require that organizations with undue levels of interest-rate risk strengthen their capital positions even though they may meet the minimum risk-based capital standards.

4060.3.5.4.6 *Claims on, and Claims Guaranteed by, OECD Central Governments*

The risk-based capital guidelines assign a zero percent risk weight to all direct claims (including securities, loans, and leases) on the central governments of the OECD-based group of countries and U.S. government agencies. Generally, the only direct claims banking organizations have on the U.S. government and its agencies are in the form of Treasury securities. Zero-coupon securities—that is, single-payment Treasury securities trading under the U.S. Treasury's Separate Trading of Registered Interest and Principal of Securities (STRIPS) program—are assigned to the zero percent risk category. A security that has been stripped by a private-sector entity, such as a brokerage firm, is considered an obligation of that entity and, accordingly, is assigned to the 100 percent risk category.

Claims that are directly and unconditionally guaranteed by an OECD-based central govern-

ment or a U.S. government agency are also assigned to the zero percent risk category. Such claims that are not unconditionally guaranteed are assigned to the 20 percent risk category. A claim is not considered to be unconditionally guaranteed by a central government if the validity of the guarantee depends on some affirmative action by the holder or a third party. Generally, securities guaranteed by the U.S. government or its agencies that are actively traded in financial markets are considered to be unconditionally guaranteed. These include Government National Mortgage Association (GNMA) and Small Business Administration (SBA) securities.

Banking organizations are permitted to assign to the zero percent risk category claims collateralized by cash on deposit in the banking organization or by OECD central governments or U.S. government agency securities for which a positive collateral margin is maintained on a daily basis, fully taking into account any change in the banking organization's exposure to the obligor or counterparty under a claim in relation to the market value of the collateral held in support of that claim. The Board is not requiring that a

specific minimum margin of collateral be maintained on collateralized transactions assigned to the zero percent risk category. The Board expects that banking organizations will establish, as a part of prudent operating procedures, a minimum level of margin for these transactions, based on such factors as the volatility of the securities involved, so as to avoid unduly frequent margin calls.

A limited number of U.S. government agency-guaranteed loans are deemed to be unconditionally guaranteed and, hence, can be assigned to the zero percent risk category. These include most loans guaranteed by the Export-Import Bank (Exim Bank),⁷⁰ loans guaranteed by the U.S. Agency for International Development (AID) under its Housing Guarantee Loan Program, SBA loans subject to a secondary participation guarantee (in accordance with SBA Form 1086), and Farmers Home Administration (FmHA) loans subject to an assignment guarantee agreement in accordance with FmHA Form 449-36.

Apart from the exceptions noted in the preceding paragraph, loans guaranteed by the U.S. government or its agencies are considered conditionally guaranteed. The guaranteed portion of the loans is assigned to the 20 percent category. These loans include, but are not limited to, loans guaranteed by the Commodity Credit Corporation (CCC), the Federal Housing Administration (FHA), the Foreign Credit Insurance Association (FCIA), the Overseas Private Investment Corporation (OPIC), and the Veterans Administration (VA), and, except as indicated above, portions of loans guaranteed by the FmHA and the SBA. Loan guarantees offered by FCIA and OPIC often guarantee against political risk. However, only that portion of a loan guaranteed by FCIA or OPIC against commercial or credit risk may receive a preferential 20 percent risk weight. The portion of government trust certificates issued to provide funds for the refinancing of foreign military sales loans made by the Federal Financing Bank or the Defense Security Assistance Agency that are indirectly guaranteed by the U.S. government also qualify for the 20 percent risk weight.

4060.3.5.4.7 Accounting for Defined Benefit Pension and Other Postretirement Plans

In September 2006, the Financial Accounting

Standards Board adopted the Statement of Financial Accounting Standard No. 158, "Employers Accounting for Defined Benefit Pension and Other Postretirement Plans" (FAS 158). The standard requires, as early as December 31, 2006, that a bank, bank holding company, or other banking or thrift organization that sponsors a single-employer defined benefit postretirement plan—such as a pension plan or health care plan—to recognize the overfunded or underfunded status of each such plan as an asset or liability on its balance sheet with corresponding adjustments recognized in accumulated other comprehensive income (AOCI), a component of equity capital. After a banking organization initially applies FAS 158, changes in the benefit plan asset or liability reported on the organization's balance sheet will be recognized in the year in which the changes occur and will result in an increase or decrease in AOCI. Postretirement plan amounts carried in AOCI are adjusted as they are subsequently recognized in earnings as components of the plans' net periodic benefit cost.

The Federal Reserve Board, along with other federal bank and thrift regulatory agencies (the Agencies⁷¹), issued a joint press release on December 14, 2006, in which they announced that FAS 158 will not affect a banking organizations' regulatory capital. The agencies decided, until they can determine otherwise, banks (and bank holding companies) should exclude from regulatory capital any amounts recorded in AOCI resulting from the adoption and application of FAS 158. The intent of the reversal is to neutralize the effect of the application of FAS 158 on regulatory capital, including the reporting of the leverage ratio and the risk-based capital measures.

4060.3.6 DIFFERENCE IN APPLICATION OF THE RISK-BASED CAPITAL GUIDELINES TO BANKING ORGANIZATIONS

The capital guidelines are generally the same for state member banks and bank holding companies. Since year-end 1992, however, there has been one significant difference: the manner in which capital is defined for use in computing

71. The Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Office of Thrift Supervision.

70. Loans guaranteed under Exim Bank's Working Capital Guarantee Program, however, receive a 20 percent risk weight.

the risk-based capital ratio. Specifically, perpetual preferred stock is handled differently for state member banks than it is for bank holding companies.

4060.3.6.1 Difference in Treatment of Perpetual Preferred Stock

Bank holding companies may include unlimited amounts of *noncumulative* perpetual preferred stock in tier 1 capital and limited amounts of cumulative perpetual preferred stock. The aggregate amount of qualifying cumulative preferred stock and qualifying trust preferred securities that a BHC may include in tier 1 capital is limited to 25 percent of the sum of qualifying common stockholders' equity, qualifying noncumulative and cumulative perpetual preferred stock, qualifying minority interest in the equity accounts of consolidated subsidiaries, and qualifying trust preferred securities. Any amount of *cumulative* perpetual preferred stock and qualifying trust preferred securities in excess of this limit may be included as tier 2 capital. In contrast, state member banks may include only noncumulative perpetual preferred stock in tier 1 capital.

4060.3.6.2 Perpetual Preferred Stock (Terms Relating to Tier 1 Treatment)

Given the importance of core capital, the Federal Reserve's guidelines exclude from tier 1 capital preferred stock (including auction-rate preferred) in which the dividend rate is reset periodically, based in whole or in part upon the banking organization's financial condition or credit standing. Under such instruments, the obligation to pay out higher dividends in response to a deterioration in an organization's financial condition is inconsistent with the essential precept that capital should provide both strength and loss-absorption capacity to an organization during periods of adversity. Rather than paying out higher dividends, banking organizations are expected to conserve capital during such periods.

Ordinarily, fixed-rate preferred stock and traditional floating- or adjustable-rate preferred stock—in which the dividend rate is based on an independent market index that is in no way tied to the issuer's financial condition—do not raise significant supervisory concerns, espe-

cially if the adjustable-rate instrument is accompanied by reasonable spreads and cap rates. However, certain other features that have been incorporated in, or mentioned for possible inclusion in, some preferred stock issues do raise serious questions about whether these issues will truly serve as a permanent, or even long-term, source of capital. Such features include step-up or similar mechanisms, whereby, after a specified period, the dividend rate automatically increases to a higher level or to a level that could create substantial incentives for the issuer to redeem the instrument. Perpetual preferred stock with this type of feature could cause the banking organization to be faced with higher dividend requirements at a future date when it is experiencing financial difficulties. Such preferred stock is not generally includable in tier 1 capital.

4060.3.7 CASH REDEMPTION OF PERPETUAL PREFERRED STOCK

Under the Federal Reserve's risk-based capital guidelines, two essential characteristics of core (tier 1) capital—as shown by the terms of common stock and perpetual preferred stock—are loss-absorption capacity and stability. In addition to existing laws and regulations that pertain to the redemption or repurchase of capital securities, the Federal Reserve's risk-based capital guidelines generally provide that any bank holding company contemplating the redemption of material amounts of permanent equity instruments, including perpetual preferred stock, should receive Federal Reserve approval before taking such action.⁷² Any perpetual preferred stock or trust preferred securities with a feature permitting redemption at the option of the issuer may qualify as capital *only if* the redemption is subject to prior approval of the Federal Reserve.

The guidelines indicate that consultation with the Federal Reserve could be unnecessary if the instrument is redeemed with the proceeds of another similar or higher-quality tier 1 instrument and the organization's capital is considered fully adequate. However, because of the need to make supervisory judgments on these conditions, as well as the objective of fostering sound capital positions, banking organizations contemplating material redemptions of core capital are generally expected to discuss these plans with their appropriate supervisory authorities, regardless of the circumstances. This has long

⁷² This general principle also applies to the redemption of limited-life capital instruments before their stated maturities.

been the expectation and practice of the Federal Reserve. Prior consultation puts the supervisory authority in a position to take appropriate action if any planned capital redemption could have an adverse impact on an organization's financial condition.

The Federal Reserve's interest in the level and composition of capital derives both from the System's general supervisory responsibilities to monitor and address any actions that could erode an organization's capital base and from the need to implement the letter and spirit of supervisory guidelines on capital adequacy. Under the Federal Reserve's guidelines, to qualify as capital an instrument may not contain or be covered by covenants, terms, or restrictions that are inconsistent with safe and sound banking practice. Moreover, perpetual preferred stock cannot contain provisions that would require future redemption of the issue, and the issuer must have the ability and legal right to defer or eliminate preferred dividends.

4060.3.7.1 Federal Reserve's Supervisory Position on Cash Redemption of Tier 1 Preferred Stock

To qualify for tier 1 treatment, redemption for cash or other nonstock assets, regardless of source, is permissible only at the issuer's option. Moreover, in view of the importance of ensuring the stability of tier 1 capital, tier 1 preferred stock instruments should also provide that cash redemption would be permitted only with the prior consent of the Federal Reserve. The Federal Reserve expects that it would usually grant such approval, when consistent with the organization's overall financial condition, if the preferred shares are redeemed with the proceeds of an acceptable tier 1 capital instrument that would maintain or strengthen the issuer's capital base. Approval could also be granted if the Federal Reserve determines that the issuer's capital position after the redemption would clearly be adequate and that the issuer's condition and circumstances warrant the reduction of a source of permanent capital.

4060.3.8 COMMON STOCK REPURCHASES AND DIVIDEND INCREASES ON COMMON STOCK

The Federal Reserve has long emphasized the importance of prudent levels of capital to the overall safety and soundness of banking organizations. In pursuit of its supervisory objective to

achieve an adequate level of capitalization in banking organizations, the Federal Reserve has over time promulgated various rules, guidelines, and standards concerning capital levels and the acceptable characteristics of various capital instruments and transactions. With respect to redemptions of common stock for cash or other valuable consideration, section 225.4(b)(1) of Regulation Y requires bank holding companies to give the Federal Reserve prior notice of any repurchase of common stock that would reduce total equity capital by 10 percent or more aggregated over any 12-month period. The risk-based capital guidelines further request that bank holding companies consult with the Federal Reserve before any material redemption of permanent equity instruments.

Because of the need for banking organizations to strengthen their capital positions generally, the Board strongly recommends that bank holding companies deemed to be experiencing financial weaknesses (or those at significant risk of developing financial weaknesses) consult with the appropriate Federal Reserve Bank before any cash redemption of common stock for cash or other valuable consideration. Similarly, any bank holding company considering expansion, either through acquisitions or through new activities, is also requested to consult with the appropriate Federal Reserve Bank before any cash redemption of common stock for cash or other valuable consideration. Although there may be legitimate uses of repurchased shares (for example, in ESOP transactions), this request is intended to prevent an imprudent or untimely repurchase that would have an immediate or potentially adverse impact on the financial condition of the banking organization. In general, Reserve Banks should discourage bank holding companies from repurchasing their shares if there would be an adverse effect on the capital of the organization. A similar procedure was adopted for redemptions of perpetual preferred stock. (See section 4060.3.7 or SR-89-20.)

Further, because the banking organizations' ability to gain access to capital markets can be further diminished by rating-agency downgrades, the Federal Reserve considers internal capital generation an important element in a banking organization's capital planning. Therefore, bank holding companies in general, but particularly those experiencing any degree of financial weakness, are requested to consult with the appropriate Federal Reserve Bank before increasing the rate of cash dividends

paid on common stock, an action that reduces capital-generation rates for companies experiencing financial weakness. It is the intention of the Federal Reserve to ensure that the financial condition, future earnings prospects, and capital level of the banking organization are consistent with any proposed increase in dividends. (See Regulation Y, section 225.4(b)(1) and appendix A, section II.)

4060.3.9 QUALIFYING MANDATORY CONVERTIBLE DEBT SECURITIES AND PERPETUAL DEBT

Mandatory convertible debt securities are essentially subordinated debt instruments that may be converted into common or perpetual preferred stock within a specified period of time, not to exceed 12 years. Qualifying mandatory convertible preferred securities generally consist of the joint issuance by a BHC to investors of trust preferred securities and a forward purchase contract, which the investors fully collateralize with the securities, that obligates the investors to purchase a fixed amount of the BHC's common stock, generally in three years. Typically, prior to exercise of the purchase contract generally in three years, the trust preferred securities are remarketed by the initial investors to new investors, and the cash proceeds are used to satisfy the initial investors' obligation to buy the BHC's common stock. The common stock replaces the initial trust preferred securities as a component of the BHC's tier 1 capital, and the remarketed trust preferred securities are excluded from the BHC's regulatory capital. A BHC wishing to issue mandatory convertible preferred securities and include them in tier 1 capital must consult with the Federal Reserve prior to their issuance to ensure that the securities' terms are consistent with tier 1 capital treatment.

4060.3.9.1 Trust Preferred Securities Mandatorily Convertible into Noncumulative Perpetual Preferred Securities

A bank holding company requested approval to include in its tier 1 capital trust preferred securities that are mandatorily convertible into noncumulative perpetual preferred securities on the same terms and subject to the same quantitative limit as trust preferred securities that mandatorily

convert into common stock. The BHC also asked the Board to clarify whether trust preferred securities that mandatorily convert to noncumulative perpetual preferred stock are eligible for the exception to the 15 percent limit afforded to qualifying mandatory convertible preferred securities under the capital guidelines. (See sections 4060.3.2.1.1.1 and 4060.3.2.1.1.2 for a more detailed discussion of the limitations on including certain restricted core capital elements in a BHC's tier 1 capital.)

The Board noted that although the regulatory definition of qualifying mandatory convertible preferred securities specifically describes an instrument convertible into common stock, the regulatory definition describes the typical, and not the exclusive, form of qualifying mandatory convertible preferred securities. For several reasons, the Board determined that qualifying mandatory convertible preferred securities also include instruments convertible into noncumulative perpetual preferred securities.

The Board based its favorable treatment of mandatory convertible preferred securities principally on the certainty that the issuer will, within a relatively short time period, replace the securities with a tier 1 capital component that is not a restricted core capital element. The interpretation notes that although common stock remains the highest form of tier 1 capital, noncumulative perpetual preferred stock is also a high form of tier 1 capital and is not a restricted core capital element. Like common stock, noncumulative perpetual preferred securities are perpetually available to absorb losses incurred by the issuer, constitute equity under generally accepted accounting principles, and allow the issuer to waive dividends on a noncumulative basis. By allowing the noncumulative waiver of dividends, noncumulative perpetual preferred securities avoid the accumulation of deferred dividends, which could possibly impede an issuer's ability to raise additional equity during times of stress.

The interpretation conveys the Board's determination that qualifying mandatory convertible preferred securities that convert to noncumulative perpetual preferred securities qualify for inclusion in the tier 1 capital of internationally active BHCs (and other BHCs) in excess of the 15 percent limit applicable to the restricted core capital elements of internationally active BHCs, if all other terms and conditions of the securities meet the Board's requirements. (See the January 23, 2006, Board staff legal interpretation.)

4060.3.10 INSPECTION OBJECTIVES

1. To determine the adequacy of capital in relation to the risks inherent in the transactions and activities of the banking organization.
2. To determine compliance with the risk-based and tier 1 leverage measures of the capital adequacy guidelines as they apply to bank holding companies. (See section 4060.4.)
3. To determine if management and operating policies, practices, and procedures for capital are adequate, and whether they reflect the requirements of the capital adequacy guidelines, if applicable.
4. To evaluate the performance of the bank holding company's officers and employees in administering and controlling the capital position of the organization, including its banking and nonbanking subsidiaries.
5. To evaluate the propriety and consistency of the banking organization's present and planned level of capitalization in light of the risk-based and leverage capital measures, as required, as well as existing conditions and future plans.
6. To initiate corrective action, in conjunction with the inspection process, when policies, procedures, or capital is deficient.

4060.3.11 INSPECTION PROCEDURES

Section 4060.3.5 lists items that examiners should consider during their analysis of capital adequacy with regard to the risk-based measure. The instructions in that section are to be followed in addition to the inspection procedures listed below.

4060.3.11.1 Verification of the Risk-Based Capital Ratio

Examiners should verify that the bank holding company has adequate systems in place to compute and document its risk-based capital ratios.

1. Determine if the bank holding company is correctly reporting the risk-based capital information requested on the Federal Reserve's FR Y-9C Reports of Condition and Income and supplementary schedules.
2. If the bank holding company has consolidated assets of less than \$500 million, determine whether the bank holding company risk-based capital guidelines still apply because—

- a. the bank holding company is engaged in nonbank activity involving significant leverage (includes off-balance-sheet activities) or
- b. the parent company has a significant amount of outstanding debt that is held by the general public.

For the qualifying components of capital (the numerator of the ratio):

3. Determine if management is adhering to the underlying terms of any currently outstanding stock issues.
4. Review common stock to ensure that the bank holding company is in compliance with the terms of any underlying agreements and to determine if more than one class exists. If more than one class exists, review the terms for any preference or non-voting features. If the terms include such features, determine whether the class of common stock qualifies for inclusion in tier 1 capital.
5. Review any perpetual and long-term preferred stock for the following:
 - a. compliance with terms of the underlying agreements, carefully noting—
 - adherence to the cumulative or noncumulative nature of the stock and
 - adherence to any conversion rights.
 - b. proper categorization as tier 1 or tier 2 for capital adequacy purposes, noting the following requirements:
 - Tier 1 perpetual preferred stock must have the following characteristics:
 - no maturity date
 - not redeemable at the option of the holder
 - unsecured
 - ability to absorb losses
 - ability and legal right for the issuer to defer or eliminate dividends or to issue waivers for preferred stock
 - any issuer-redemption feature subject to prior Federal Reserve approval
 - fixed-rate or traditional floating- or adjustable-rate
 - no features that would require or create significant incentives for the issuer to (1) redeem the instrument for cash, cash equivalents, or other consideration of value (for ex-

- ample, a credit-sensitive dividend feature) or (2) repurchase the instrument, such as an “exploding rate,” an auction-rate pricing mechanism, or a feature (for example, a dividend-rate step-up or a market-conversion feature) that allows the stock to be converted into increasing numbers of common shares
- Perpetual preferred stock, includable within tier 2 capital without a sublimit, must have the characteristics listed in 5.b. above for tier 1 perpetual preferred stock. But perpetual preferred stock qualified for inclusion in tier 2 capital may not qualify for inclusion in tier 1 capital. For example, cumulative or auction-rate perpetual preferred stock, which does not qualify for tier 1 capital, may be includable in tier 2 capital.
6. Verify that minority interest in equity accounts of consolidated subsidiaries included in tier 1 capital consists only of tier 1 qualifying capital elements. Determine whether any perpetual preferred stock of a subsidiary that is included in minority interest, without explicit Federal Reserve approval, is secured by the subsidiary's assets. If so, that stock may not be included in capital.
 7. For the BHC's trust preferred securities that are included in tier 1 capital, determine if the following requirements have been met:
 - a. The supervising Federal Reserve Bank was consulted *before* the securities were issued and included in tier 1 capital.
 - b. The BHC, for accounting and reporting purposes, has determined the appropriate application of GAAP (including FIN 46R) to its trust issuing trust preferred securities. Ascertain that there is no substantive difference in the treatment of trust preferred securities issued by such trusts, or in the treatment of the underlying junior subordinated debt, for purposes of regulatory reporting and GAAP accounting.
 - c. The securities allow for dividends to be deferred for at least 20 consecutive quarters without an event of default, unless an event of default leading to acceleration permitted under section II.A.1.c.iv.(2) has occurred.
 - d. The required notification period for deferral of dividends is no more than 15 business days before the payment date.
 - e. The securities have the same restrictions, terms, and features as qualifying perpetual preferred stock.
 - f. the sole asset of the trust is a junior subordinated note issued by the sponsoring banking organization. The note must have a minimum maturity of 30 years and be subordinated with regard to both liquidation and priority of periodic payments to all senior and subordinated debt of the sponsoring banking organization (other than other junior subordinated notes underlying trust preferred securities).
 - g. The note complies with section II.A.2.d. and the Federal Reserve's subordinated debt policy statement. (See 12 C.F.R. 250.166.) The note may, however, provide for an event of default and the acceleration of principal and accrued interest upon (1) nonpayment of interest for 20 or more consecutive quarters or (2) termination of the trust without redemption of the trust preferred securities, distribution of the notes to investors, or assumption of the obligation by a successor to the banking organization.
 - h. In the last five years before the maturity of the note, the outstanding amount of the associated trust preferred securities is excluded from tier 1 capital and included in tier 2 capital, and the trust preferred securities are subject to the amortization provisions and quantitative restrictions set forth in sections II.A.2.d.iii. and iv. as if the trust preferred securities were limited-life preferred stock.
8. Review the intermediate-term preferred stock and subordinated debt instruments included in capital for the following:
 - a. compliance with the terms of the underlying agreements, noting that subordinated debt containing one or both of the following terms may not be included in capital:
 - interest payments tied to the banking organization's financial condition
 - acceleration clauses or broad conditions of events of default that are inconsistent with safe and sound banking practices
 - b. compliance with restrictions on the inclusion of such instruments in capital by verifying that the aggregate amount of both types of instruments, together with trust preferred securities and other restricted core capital elements (other than cumulative perpetual preferred

- stock), does not exceed 50 percent of tier 1 capital (net of all goodwill) and that the portions includable in tier 2 capital possess the following characteristics:
- unsecured
 - minimum five-year original weighted average maturity
 - in the case of subordinated debt, contains terms stating that the debt is not a deposit, is not insured by a federal agency, does not have credit-sensitive features or other provisions that are inconsistent with safe and sound banking practice, does not contain provisions permitting debt holders to accelerate the payment of principal or interest upon the occurrence of any event, cannot be redeemed without prior approval from the Federal Reserve, and is subordinated to depositors and general creditors
- c. appropriate amortization, if the instruments have a remaining maturity of less than five years
9. By reviewing minutes of board of directors meetings, determine if a stock offering or subordinated debt issue is being considered. If so, determine that management is aware of the risk-based capital requirements for inclusion in capital.
10. Verify that the transactions within the allowance for loan and lease losses have been properly accounted for during the inspection period, and verify that the amount included in tier 2 capital has been limited to 1.25 percent of weighted-risk assets.
- the bank holding company's risk-weighted asset base and (2) if they were excluded from tier 1 capital—the ratio's numerator. See section III.B.6.
- b. Determine whether any of the bank holding company's liquidity facilities meet the definition and requirements of an "eligible ABCP liquidity facility" under the Federal Reserve's risk-based capital guidelines. See section III.B.3.iv.
- c. From the bank holding company's supporting documentation of its risk-based capital ratios, determine whether the bank holding company held risk-based capital against its eligible ABCP liquidity facilities.
- d. Determine whether the bank holding company has applied the correct conversion factors to the eligible ABCP liquidity facilities when it determined the amount of risk-weighted assets for its risk-based capital ratios. See section III.D.
- For those eligible ABCP liquidity facilities having an original maturity of one year or less, determine if a 10 percent credit-conversion factor was used.
 - For those eligible ABCP liquidity facilities having an original maturity exceeding one year, determine if a 50 percent credit-conversion factor should have been used.
- e. Determine if ineligible ABCP liquidity facilities were treated as direct-credit substitutes or as recourse obligations, as required by the risk-based capital guidelines.

For the calculation of risk-weighted assets (the denominator of the ratio):

11. Determine whether the bank holding company consolidates, in accordance with the Financial Accounting Standards Board's FIN 46-R, the assets of any asset-backed commercial paper (ABCP) program that it sponsors.
- a. Determine whether the bank holding company's ABCP program meets the definition of a "sponsored ABCP program" under the Federal Reserve's risk-based capital guidelines. If the bank holding company does consolidate the assets of an ABCP program, review the documentation of its risk-based capital ratio calculations and determine (1) whether the associated ABCP program's assets and minority interests were excluded from
12. Verify that each on- and off-balance-sheet item has been assigned to the appropriate risk category in accordance with the risk-based capital guidelines. Close attention should be paid to the underlying obligor, collateral, and guarantees, and to assignment to a risk category based on the terms of a claim. The claim should be assigned to the risk category appropriate to the highest risk option available under the terms of the transaction. Verify that the bank holding company's documentation supports the assignment of preferential risk weights. If necessary, recalculate the value of risk-weighted assets.
13. Verify that all off-balance-sheet items have been properly converted to credit-

equivalent amounts, based on the risk-based capital guidelines. Close attention should be paid to the proper reporting of assets sold with recourse, financial and performance standby letters of credit, participations of off-balance-sheet transactions, and commitments.

4060.3.11.2 Verification of the Tier 1 Leverage Ratio

1. Verify that the bank holding company has correctly calculated tier 1 capital in accordance with the definition of tier 1 capital, as set forth in the risk-based capital guidelines.
2. Verify that the bank holding company has properly calculated average total consolidated assets.

4060.3.11.3 Overall Assessment of Capital Adequacy

1. For bank holding companies that do not meet the minimum risk-based tier 1 leverage capital standard, as required, or that are otherwise considered to lack sufficient capital to support their activities, examine the capitalization plans for achieving adequate levels of capital. Determine whether the plans are acceptable to the appropriate Federal Reserve Bank's management. Review and comment on these plans and on any progress achieved in meeting the requirements.
2. The analysis of capital adequacy requires an evaluation of the propriety and consistency of the bank holding company's present and planned level of capitalization in light of existing conditions and future plans. In this regard, the examiner assigned to assessing capital adequacy should do the following:
 - a. Using the latest Bank Holding Company Performance Report (BHCPR), analyze applicable ratios involving capital funds, comparing these ratios with those of its peer group and investigating trends or significant variations from peer-group averages.
 - b. With regard to the bank holding company's financial condition, determine that capital is sufficient to compensate for any instabilities or deficiencies in the asset and liability mix and its quality.
 - c. Determine if the bank holding company's consolidated earnings performance enables it to fund its expansion adequately, to remain competitive in the market, and to replenish or increase its capital funds as needed.
 - d. Analyze trends in the levels of debt versus equity funding, including double leverage, to determine the level of borrowing to fund equity, if any.
 - e. If the allowance for loan and lease losses is determined to be inadequate, analyze the impact of current and potential losses on the bank holding company's capital structure.
 - f. Consider the impact of any management deficiencies on present and projected capital.
 - g. Determine if there are any assets or contingent accounts whose quality represents an actual or potential serious weakening of capital.
 - h. Consider the potential impact of any proposed changes in controlling ownership (if approved) on the projected capital position.
 - i. Analyze assets that are considered undervalued on the balance sheet and carried at below-market values. The excess of fair value over cost may represent an additional cushion to the bank holding company.
 - j. Consider the cushion for absorbing losses that may be provided by any subordinated debt, trust preferred securities, other restricted core capital elements, or intermediate-term preferred stock not included in tier 2 capital because of the 50 percent of tier 2 capital limitation, or not included in capital for tier 1 leverage ratio purposes.
 - k. Analyze any collateral and guarantees supporting assets that may not be taken into account for risk-based or tier 1 leverage capital purposes, and consider these collateral and guarantees in the overall assessment of capital adequacy. This analysis should include guarantees provided through credit-derivative transactions (see section 4060.3.5.3.17) in which the credit exposure is assigned to the risk category of the obligor of the reference asset or any collateral. For the latter, determine whether adequate capital and reserves are held against the exposures to reference assets.
 - l. Evaluate the consolidated asset quality of the bank holding company, and deter-

- mine whether it needs to strengthen its capital position, based on the following:
 - the severity of problem and classified assets
 - investment or loan-portfolio concentrations
 - the adequacy of loan-loss reserves
 - m. Analyze the bank holding company's management of interest-rate risk and use of hedging instruments. Determine if the bank holding company should strengthen its capital position, based on undue levels of risk at any structural level within the organization. Review hedging instruments for the use of interest-only strips (IOs) and principal-only strips (POs) that may raise concerns, and review management's expertise in using hedging instruments.
3. Review capital adjustments for goodwill and other intangible assets (such as core deposit intangibles, favorable leasehold rights, organization costs, purchased trust-servicing rights, purchased investment-management relationships, purchased home-equity rights, and merchant-servicing rights), that are required to be deducted from capital. An analysis of intangible assets that may be included in capital must also be performed using the following procedures:
 - a. Verify the existence of, the evidence of title to, and the accounting for intangible assets. Review and assess both the book values and the fair values assigned to intangible assets. Also verify the adequacy of the documentation evidencing the values, the amortization methods, and assigned amortization periods. When assessing the quality of a banking organization's intangible assets for purposes of evaluating its overall capital position, consider—
 - the reliability and predictability of any cash flows associated with the assets and the degree of certainty that can be achieved in periodically determining the asset's useful life and fair value,
 - the existence of an active and liquid market for the assets, and
 - the feasibility of selling the asset apart from the banking organization or from the bulk of its assets.
 - b. Verify that intangibles are being reduced in accordance with the amortization method and that, if the carrying amount exceeds its fair value, the book value of the intangible asset is reduced accordingly or is written off.
 - c. Determine if a quarterly review of the book and fair values and of the level and quality of all intangibles is performed.
 - d. Verify that goodwill and other nonqualifying identifiable intangibles are deducted from tier 1 capital.
 - e. Determine if the amount of mortgage-servicing rights or purchased credit-card relationships was within the established limitations on the amount that may be included in tier 1 capital.
 - f. Ascertain whether the asset values of the intangible assets were reassessed during the annual audit.
 4. In light of the overall capital adequacy analysis, and in accordance with the Federal Reserve's capital adequacy guidelines, determine if any appropriate supervisory action is warranted because of deficient levels of capital in relation to inherent risks of the bank holding company organization.
 5. Review the following in preparation for discussion with appropriate management:
 - a. all noted deficiencies regarding the capital accounts
 - b. the adequacy of present and projected capital
 6. Ascertain through minutes, reports, etc., or through discussions with management, how the bank holding company's future business and operational plans will affect its asset quality, capital position, and other areas of its balance sheet.
 7. Prepare comments for the inspection report based on the bank holding company's capital position, including any comments on deficiencies that were observed.
 8. Update the appropriate workpapers with any information that will facilitate future inspections.

4060.3.12 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

<i>Subject</i>	<i>Laws¹</i>	<i>Regulations²</i>	<i>Interpretations³</i>	<i>Orders</i>
Capital adequacy guidelines—BHCs:				
Measures:				
Risk-based		225, appendix A	3–1920	
Leverage Measure		225, appendix B	3–1940	
Small Bank Holding Company Policy Statement—Policy Statement on Assessment of Financial and Managerial Factors		225, appendix C	4–868	
Tier 1 leverage		225, appendix D	3–1955	
Market-risk measure		225, appendix E	3–1960	
Bank holding company should be a source of financial and managerial strength to its subsidiaries		225.4(a)		1981 FRB 344
Policy statement on the responsibility of BHCs to act as a source of strength to their subsidiary banks			4–878	1987 FRB 441
Board Legal Division Staff Interpretation—Trust preferred securities that are mandatorily convertible into noncumulative perpetual preferred securities (January 23, 2006)				

4060.3.12 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

<i>Subject</i>	<i>Laws</i> ¹	<i>Regulations</i> ²	<i>Interpretations</i> ³	<i>Orders</i>
Risk-based capital treatment for certain indemnified securities-lending arrangements applying a loan-equivalent methodology using a bank's internal VaR model			August 15, 2006, May 14, 2003	

1. 12 U.S.C., unless specifically stated otherwise.
2. 12 C.F.R., unless specifically stated otherwise.

3. *Federal Reserve Regulatory Service* reference.

WHAT'S NEW IN THIS REVISED SECTION

This revised section references the June 3, 2011, "Interagency Guidance on the Advanced Measurement Approaches for Operational Risk." The guidance clarifies certain implementation issues related to the advanced measurement approaches for operational risk in the federal banking agencies' advanced capital adequacy framework. In addition, the section is revised to include a summary of the June 14, 2011, revisions to the advance approaches rules, which establish a required permanent capital floor equal to the minimum risk-based capital requirements under the general risk-based capital rules.

The Board adopted an advanced capital adequacy framework, effective April 1, 2008, that implements, in the United States, the revised international capital framework (Basel II) developed by the Committee on Banking Supervision (See 12 C.F.R. 225, appendix G or 72 *Fed. Reg.* 69287). The rule provides a risk-based capital framework that requires some bank holding companies (BHCs) and permits other qualifying BHCs¹ to use an internal ratings-based approach to calculate credit-risk capital requirements and advanced measurement approaches (AMA) in order to calculate regulatory operational-risk capital requirements. The rule also describes the qualifying criteria for BHCs required or seeking to operate under the framework. See also the revisions effective March 29, 2010, at 75 *Fed. Reg.* 4636.²

4060.5.1 AMA INTERAGENCY GUIDANCE FOR OPERATIONAL RISK

On June 3, 2011, the federal banking agencies (the agencies) issued *Interagency Guidance on the Advanced Measurement Approaches for Operational Risk* to address and clarify implementation issues related to the AMA in applying the agencies' advanced capital adequacy

framework. This guidance focuses on the combination and use of the required AMA data elements—(1) internal operational loss event data; (2) external operational loss event data; (3) business environment and internal control factors; and (4) scenario analysis, which is discussed in greater detail. Governance and validation are also discussed since they ensure the integrity of a bank's AMA framework. (See SR-11-8 and its attachment.)

4060.5.2 ESTABLISHMENT OF A RISK-BASED CAPITAL FLOOR

Section 171(b)(2) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) requires the agencies to establish minimum leverage and risk-based capital requirements on a consolidated basis for insured depository institutions, depository institution holding companies,³ and nonbank financial companies supervised by the Board. These capital requirements cannot be less than the generally applicable capital requirements that apply to insured depository institutions.⁴

On June 28, 2011, the agencies published a final rule (effective July 28, 2011) that amended the advanced approaches rules with a permanent floor equal to the minimum risk-based capital requirements under the general risk-based capital rules. (See the Board's press release and 76 *Fed. Reg.* 37620, June 28, 2011.) Under the amended rule, banking organizations subject to the advanced approaches rules are required to, each quarter, calculate and compare their minimum tier 1 and total risk-based capital ratios as calculated under the general risk-based capital rules with the same ratios as calculated under

3. Section 171 of the Dodd-Frank Act (Pub. L. 111-203, section 171, 124 Stat. 1376, 1435-38 (2010)) defines "depository institution holding company" to mean a bank holding company or a savings and loan holding company (as those terms are defined in section 3 of the Federal Deposit Insurance Act) that is organized in the United States, including any bank or savings and loan holding company that is owned or controlled by a foreign organization, but does not include the foreign organization. (See section 171 of the Dodd-Frank Act, 12 U.S.C. 5371.)

4. The "generally applicable" capital requirements are those established by the federal banking agencies to apply to insured depository institutions, regardless of total asset size or foreign exposure, under the prompt corrective action provisions of the Federal Deposit Insurance Act. See 12 U.S.C. 5371(a).

1. The rule also applies to state member banks.

2. The revisions address the Financial Accounting Standards Board's adoption of Statements of Financial Accounting Standards Nos. 166 (ASC topic 860, "Transfers and Servicing") and 167 (ASC subtopic 810-10, "Consolidation—Overall"). These accounting standards make substantive changes to how banking organizations account for many items, including securitized assets, that had been previously excluded from these organizations' balance sheets.

the advanced approaches risk-based capital rules. They are to compare the lower of the two tier 1 risk-based capital ratios and the lower of the two total capital ratios to the minimum tier 1 ratio requirement and total capital ratio requirement of the advanced approaches rules to determine whether the minimum capital requirements are met.⁵ The amendment prevents the minimum capital requirements for a banking organization that has adopted the advanced approaches rule from declining below the minimum capital requirements that apply to insured depository institutions.

5. 12 C.F.R. 208, appendix F, section 3 and 12 C.F.R. 225, appendix G, section 3.

BHCs that are subject to the advanced approaches rule are to calculate their floor ratios under the general risk-based capital rules for state member banks.⁶ When calculating the ratios, a BHC may include in capital certain debt or equity instruments that were issued before May 19, 2010, as specified in section 171 of the Dodd-Frank Act.⁷

6. 12 C.F.R. 208, appendix A.

7. See 12 U.S.C. 5371(b)(4). Generally, section 171 provides that capital instruments issued before May 19, 2010, that would have to be deducted under section 171 may be deducted from regulatory capital over a three-year phase-in period beginning in 2013. Section 171 also provides additional exemptions and phase-in periods for particular institutions.

4060.5.3 LAWS, REGULATIONS, INTERPRETATIONS, ORDERS

<i>Subject</i>	<i>Laws¹</i>	<i>Regulations²</i>	<i>Interpretations³</i>	<i>Orders</i>
Capital Adequacy Guidelines for BHCs: Internal-Ratings-Based and Advanced Measurement Approaches		225 appendix G	3-2027	
Capital Adequacy Guidelines for Banks: Internal-Ratings-Based and Advanced Measurement Approaches		208 appendix F	3-1993	
BHC and Bank Risk-Based Capital Floor	5371 (Section 171(b)(2), Dodd-Frank Act)	225 appendix G, and 208 appendix F		
Supervisory Review Process of Capital Adequacy (Pillar 2) Related to the Implementation of the Advanced Approaches Final Rule			3-1506.33	
Interagency Statement on U.S. Implementation of Basel II Advanced Approaches Framework			3-1506.332	

1. 12 U.S.C., unless specifically stated otherwise.

2. 12 C.F.R., unless specifically stated otherwise.

3. *Federal Reserve Regulatory Service* reference.

Overview of Asset-Backed Commercial Paper Programs

Section 4060.8

4060.8.1 ASSET-BACKED COMMERCIAL PAPER PROGRAMS

Asset-backed commercial paper (ABCP) programs provide a means for corporations to obtain funding by selling or securitizing pools of homogenous assets (for example, trade receivables) to special-purpose entities (SPEs/ABCP programs). The ABCP program raises funds for purchase of these assets by issuing commercial paper into the marketplace. The commercial-paper investors are protected by structural enhancements provided by the seller (for example, overcollateralization, spread accounts, or early-amortization triggers) and by credit enhancements (for example, subordinated loans or guarantees) provided by banking organization sponsors of the ABCP program and by other third parties. In addition, liquidity facilities are also present to ensure the rapid and orderly repayment of commercial paper should cash-flow difficulties emerge. ABCP programs are nominally capitalized SPEs that issue commercial paper. A sponsoring banking organization establishes the ABCP program but usually does not own the conduit's equity, which is often held by unaffiliated third-party management companies that specialize in owning such entities, and are structured to be bankruptcy remote.

Typical Structure

ABCP programs are funding vehicles that banking organizations and other intermediaries establish to provide an alternative source of funding to themselves or their customers. In contrast to term securitizations, which tend to be amortizing, ABCP programs are ongoing entities that usually issue new commercial paper to repay maturing commercial paper. The majority of ABCP programs in the capital markets are established and managed by major international commercial banking organizations. As with traditional commercial paper, which has a maximum maturity of 270 days, ABCP is short-term debt that may either pay interest or be issued at a discount (see figure 1).

Types of ABCP Programs

Multi-seller programs generally provide working capital financing by purchasing or advancing against receivables generated by multiple corporate clients of the sponsoring banking orga-

nizations. These programs are generally well diversified across both sellers and asset types.

Single-seller programs are generally established to fund one or more types of assets originated by a single seller. The lack of diversification is generally compensated for by increased program-wide credit enhancement.

Loan-backed programs fund direct loans to corporate customers of the ABCP program's sponsoring banking organization. These loans are generally closely managed by the banking organization and have a variety of covenants designed to reduce credit risk.

Securities-arbitrage programs invest in securities that generally are rated AA- or higher. They generally have no additional credit enhancement at the seller/transaction level because the securities are highly rated. These programs are typically well diversified across security types. The arbitrage is mainly due to the difference between the yield on the securities and the funding cost of the commercial paper.

Structured investment vehicles (SIVs) are a form of a securities-arbitrage program. These ABCP programs invest in securities typically rated AA- or higher. SIVs operate on a market-value basis similar to market-value collateralized debt obligation in that they must maintain a dynamic overcollateralization ratio determined by analysis of the potential price volatility on securities held in the portfolio. SIVs are monitored daily and must meet strict liquidity, capitalization, leverage, and concentration guidelines established by the rating agencies.

Key Parties and Roles

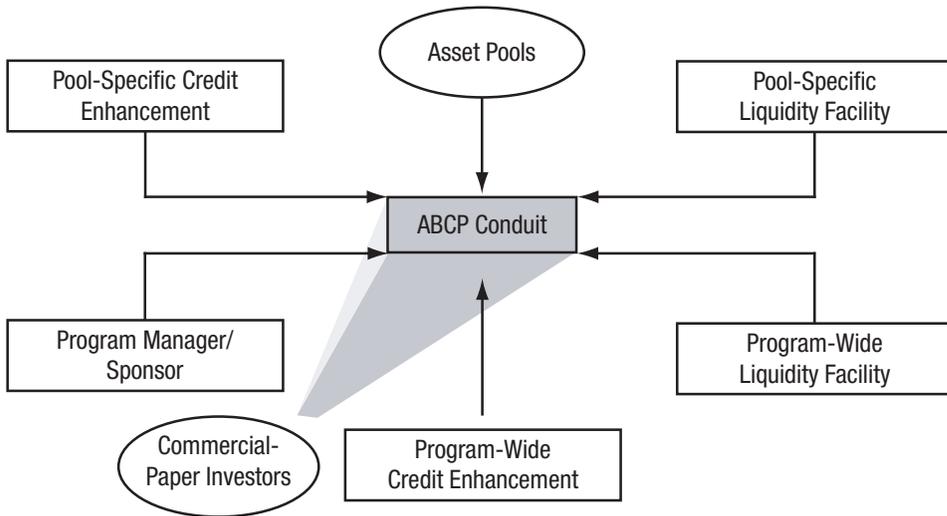
Key parties for an ABCP program include the following:

- program management/administrators
- credit-enhancement providers
- liquidity-facility providers
- seller/servicers
- commercial paper investors

Program Management

The sponsor of an ABCP program initiates the creation of the program but typically does not own the equity of the ABCP program, which is

Figure 1. Asset-backed commercial paper structure



provided by unaffiliated third-party investors. Despite not owning the equity of the ABCP program, sponsors usually retain a financial stake in the program by providing credit enhancement, liquidity support, or both, and they play an active role in managing the program. Sponsors typically earn fees—such as credit-enhancement, liquidity-facility, and program-management fees—for services provided to their ABCP programs.

Typically, an ABCP program makes arrangements with various agents/servicers to conduct the administration and daily operation of the ABCP program. This includes such activities as purchasing and selling assets, maintaining operating accounts, and monitoring the ongoing performance of each transaction. The sponsor is also actively engaged in the management of the ABCP program, including underwriting the assets purchased by the ABCP program and the type/level of credit enhancements provided to the ABCP program.

Credit-Enhancement Providers

The sponsoring banking organization typically provides pool-specific and program-wide backup liquidity facilities, and program-wide credit enhancements, all of which are usually unrated (pool-specific credit enhancement, such as over-collateralization, is provided by the seller of the assets). These enhancements are fundamental

for obtaining high investment-grade ratings on the commercial paper issued to the market by the ABCP program. Seller-provided credit enhancement may exist in various forms and is generally sized based on the type and credit quality of the underlying assets as well as the quality and financial strength of seller/servicers. Higher-quality assets may only need partial support to achieve a satisfactory rating for the commercial paper. Lower-quality assets may need full support.

Liquidity-Facility Providers

The sponsoring banking organization and in some cases, unaffiliated third parties, provide pool-specific or program-wide liquidity facilities. These backup liquidity facilities ensure the timely repayment of commercial paper under certain conditions, such as when financial market disruptions or cash-flow timing mismatches were to occur, but generally not under conditions associated with the credit deterioration of the underlying assets or the seller/servicer to the extent that such deterioration is beyond what is permitted under the related asset-quality test.

Commercial Paper Investors

Commercial paper investors are typically institutional investors, such as pension funds, money market mutual funds, bank trust departments, foreign banks, and investment companies. Com-

mercial paper maturities range from one day to 270 days, but most frequently are issued for 30 days or less. There is a limited secondary market for commercial paper since issuers can closely match the maturity of the paper to the investors' needs. Commercial paper investors are generally repaid from the reissuance of new commercial paper or from cash flows stemming from the underlying asset pools purchased by the program. In addition, to ensure timely repayment in the event that new commercial paper cannot be issued or if anticipated cash flows from the underlying assets do not occur, ABCP programs utilize backup liquidity facilities. Furthermore, the banking organization can purchase the ABCP from the conduit if the commercial paper cannot be issued. Pool-specific and program-wide credit enhancements also protect commercial paper investors from deterioration of the underlying asset pools.

4060.8.2 THE LOSS WATERFALL

The loss waterfall diagram (see figure 2) for the exposures of a typical ABCP program generally has four legally distinct layers. However, most legal documents do not specify which form of credit or liquidity enhancement is in a priority position after pool-specific credit enhancement is exhausted due to defaults. For example, after becoming aware of weakness in the seller/servicer or in asset performance, an ABCP program sponsor may purchase assets out of the conduit using pool-specific liquidity. Liquidity agreements must be subject to a valid asset-quality test that prevents the purchase of defaulted or highly delinquent assets. Liquidity facilities that are not limited by such an asset-quality test are to be viewed as credit enhancement and are subject to the risk-based capital requirements applicable to direct-credit substitutes.

Pool-Specific Credit Enhancement

The form and size of credit enhancement for each particular asset pool is dependent upon the nature and quality of the asset pool and the seller/servicer's risk profile. In determining the level of credit enhancement, consideration is given to the seller/servicer's financial strength, quality as a servicer, obligor concentrations, and obligor credit quality, as well as the historic performance of the asset pool. Credit enhancement is generally sized to cover a multiple level

of historical losses and dilution for the particular asset pool. Pool-specific credit enhancement can take several forms, including overcollateralization, cash reserves, seller/servicer guarantees (for only highly rated seller/servicers), and subordination. Credit enhancement can either be dynamic (that is, increases as the asset pool's performance deteriorates) or static (that is, fixed percentage). Pool-specific credit enhancement is generally provided by the seller/servicer (or carved out of the asset pool in the case of overcollateralization) but may be provided by other third parties.

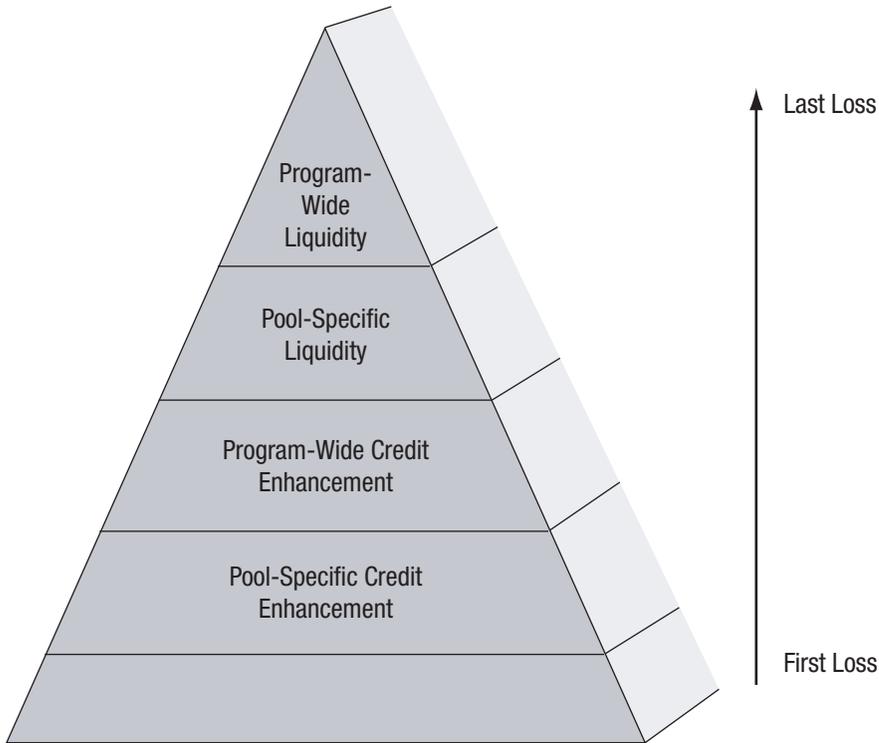
The ABCP program sponsor or administrator will generally set strict eligibility requirements for the receivables to be included in the purchased asset pool. For example, receivable eligibility requirements will establish minimum credit ratings or credit scores for the obligors and the maximum number of days the receivable can be past due.

Usually the purchased asset pools are structured (credit-enhanced) to achieve a credit-quality equivalent of investment grade (that is, BBB or higher). The sponsoring banking organization will typically utilize established rating agency criteria and structuring methodologies to achieve the desired internal rating level. In certain instances, such as when ABCP programs purchase ABS, the pool-specific credit enhancement is already built into the purchased ABS and is reflected in the security's credit rating. The internal rating on the pool-specific liquidity facility provided to support the purchased asset pool will reflect the inclusion of the pool-specific credit enhancement and other structuring protections.

Program-Wide Credit Enhancement

The second level of contractual credit protection is the program-wide credit enhancement, which may take the form of an irrevocable loan facility, a standby letter of credit, a surety bond from a monoline insurer, or an issuance of subordinated debt. Program-wide credit enhancement protects commercial paper investors if one or more of the underlying transactions exhaust the pool-specific credit enhancement and other structural protections. The sponsoring banking organization or third-party guarantors are providers of this type of credit protection. The program-wide credit enhancement is generally sized by

Figure 2. The Loss Waterfall



the rating agencies to cover the potential of multiple defaults in the underlying portfolio of transactions within ABCP conduits and takes into account concentration risk among seller/servicers and industry sectors.

Pool-Specific Liquidity

Pool-specific liquidity facilities are an important structural feature in ABCP programs because they ensure timely payment on the issued commercial paper by smoothing timing differences in the payment of interest and principal on the pooled assets and ensuring payments in the event of market disruptions. The types of liquidity facilities may differ among various ABCP programs and may even differ among asset pools purchased by a single ABCP program. For instance, liquidity facilities may be structured either in the form of (1) an asset-purchase agreement, which provides liquidity to the ABCP program by purchasing nondefaulted assets from a specific asset pool, or (2) a loan to the ABCP

program, which is repaid solely by the cash flows from the underlying assets.¹ Some older ABCP programs may have both pool-specific liquidity and program-wide liquidity coverage, while more-recent ABCP programs tend to utilize only pool-specific facilities. Typically, the seller-provided credit enhancement continues to provide credit protection on an asset pool that is purchased by a liquidity banking organization so that the institution is protected against credit losses that may arise due to subsequent deterioration of the pool.

Pool-specific liquidity, when drawn prior to the ABCP program’s credit enhancements, is subject to the credit risk of the underlying asset pool. However, the liquidity facility does not provide direct credit enhancement to the commercial paper holders. Thus, the pool-specific liquidity facility generally is in an economic second-loss position after the seller-provided credit enhancements and prior to the program-

1. Direct-liquidity loans to an ABCP program may be termed a *commissioning agreement* (most likely in a foreign bank program) and may share in the security interest in the underlying assets when commercial paper ceases to be issued due to deterioration of the asset pool.

wide credit enhancement even when the legal documents state that the program-wide enhancement would absorb losses prior to the pool-specific liquidity facilities. This is because the sponsor of the ABCP program would most likely manage the asset pools in such a way that deteriorating portfolios or assets would be put to the liquidity banking organizations prior to any defaults that would require a draw against the program-wide credit enhancement.² While the liquidity banking organization is exposed to the credit risk of the underlying asset pool, the risk is mitigated by the seller-provided credit enhancement and the asset-quality test.³ At the time that the asset pool is put to the liquidity banking organization, the facility is usually fully drawn because the entire amount of the pool that qualifies under the asset-quality test is purchased by the banking organization. However, with respect

to revolving transactions (such as credit card securitizations) it is possible to average less than 100 percent of the commitment.

Program-Wide Liquidity

The senior-most position in the waterfall, program-wide liquidity, is provided in an amount sufficient to support that portion of the face amount of all the commercial paper that is issued by the ABCP program that is necessary to achieve the desired external rating on the issued paper. In some cases, a liquidity banking organization that extends a direct liquidity loan to an ABCP program may be able to access the program-wide credit enhancement to cover losses while funding the underlying asset pool.

2. In fact, according to the contractual provisions of some conduits, a certain level of draws on the program-wide credit enhancement is a condition for unwinding the conduit program, which means that this enhancement is never meant to be used.

3. An asset-quality test or liquidity-funding formula determines how much funding the liquidity banking organization will extend to the conduit based on the quality of the underlying asset pool at the time of the draw. Typically, liquidity banking organizations will fund against the conduit's purchase price of the asset pool less the amount of defaulted assets in the pool.

WHAT'S NEW IN THIS REVISED SECTION

The guidance in this section does not apply to U.S. bank holding companies (BHCs) or intermediate holding companies of foreign banking organizations with \$50 billion or more in total consolidated assets. See SR letter 15-18, "Federal Reserve Supervisory Assessment of Capital Planning and Positions for LISCC Firms and Large and Complex Firms" (section 4063.0.1) and SR letter 15-19, "Federal Reserve Supervisory Assessment of Capital Planning and Positions for Large and Noncomplex Firms" (section 4065.0.1) for more information. In addition, inactive guidance references in this section have been updated.

This supervisory guidance provides direction to supervisory staff and BHCs on the declaration and payment of dividends,¹ capital redemptions, and capital repurchases by BHCs in the context of their capital planning processes. The guidance establishes Federal Reserve expectations that a BHC will inform and consult with Federal Reserve supervisory staff sufficiently in advance of (1) declaring and paying a dividend that could raise safety-and-soundness concerns (e.g., declaring and paying a dividend that exceeds earnings for the period for which the dividend is being paid); (2) redeeming or repurchasing regulatory capital instruments when the BHC is experiencing financial weaknesses; or (3) redeeming or repurchasing common stock or perpetual preferred stock that would result in a net reduction as of the end of a quarter in the amount of such equity instruments outstanding compared with the beginning of the quarter in which the redemption or repurchase occurred.

While these principles (as stated in SR-09-4) are applicable to all BHCs, they are especially relevant for BHCs that are experiencing financial difficulties and/or receiving public funds. Supervisory staff should document their analyses of the issues discussed below and include such documentation in workpapers related to

1. The term "dividends" as used in SR-09-4 refers to dividends on common stock and preferred stock, as well as dividends or interest on the subordinated notes underlying trust preferred securities and other tier 1 capital instruments, in cash or other value (collectively, "dividends"). Stock dividends (i.e., dividends in the form of common stock) are excluded. The priority of payment of dividends is based on the level of seniority of the instrument, which is established by contract between an issuer and its investors.

supervisory activities.² Such documentation not only provides a basis for constructive dialogue with an organization's management, but also supports current and future supervisory actions or initiatives. Reserve Bank and Board staff will develop a supervisory response in all instances where concerns regarding depletion of capital arise for a BHC that is experiencing financial difficulties.³

4060.9.1 REVIEW OF CAPITAL ADEQUACY MANAGEMENT

A fundamental principle underlying the Federal Reserve's supervision and regulation of BHCs is that a BHC should serve as a source of managerial and financial strength to its subsidiary banks.⁴ Consistent with this premise, the Federal Reserve expects an organization to hold capital commensurate with its overall risk profile. The risk-based capital rules state that the capital requirements are minimum standards based primarily on broad credit-risk considerations. The risk-based capital ratios do not take explicit account of the quality of individual asset portfolios or the range of other types of risk to which banking organizations may be exposed (e.g., interest-rate, liquidity, market, and operational risks). For this reason, banking organizations are generally expected to operate with capital positions well above the minimum ratios, with the amount of capital held by a banking organization corresponding to its broad risk exposure. Because an overall assessment of capital adequacy must take into account factors

2. As discussed in SR-13-21, "Inspection Frequency and Scope Requirements for Bank Holding Companies and Savings and Loan Holding Companies with Total Consolidated Assets of \$10 Billion or Less," risk-focused supervision of certain noncomplex BHCs with consolidated assets of less than \$1 billion relies extensively on off-site monitoring, surveillance, and the assessments of primary banking supervisors of holding company subsidiaries. For such BHCs, supervisory staff generally will be able to rely to a large extent on off-site surveillance and monitoring activities to identify potential supervisory issues related to capital adequacy as discussed in SR-09-4. Expectations for related documentation are likewise commensurate with the size and complexity of the BHC.

3. Notwithstanding the general guidance in SR-09-4, the Federal Reserve may establish more stringent institution-specific requirements under its supervisory or enforcement authority. To the extent those requirements are more stringent than this guidance, those requirements supersede this guidance.

4. See 12 CFR 225.4(a)(1).

beyond those reflected in the minimum regulatory capital ratios, supervisory assessments of capital adequacy may differ significantly from conclusions based solely on the level of an organization's risk-based capital ratio.

Consequently, an organization's internal process for assessing capital adequacy should reflect a full understanding of its risks and ensure that it holds capital corresponding to those risks to maintain overall capital adequacy. Key among these risks is the risk of illiquidity, particularly that a perceived lack of financial strength (e.g., a capital shortfall relative to potential losses in a stress scenario) may lead investors and counterparties to withhold funds or otherwise cease engaging in business with the organization. This is particularly important for a banking organization that is a core clearing and settlement organization or that has a significant presence in critical financial markets; such an organization is expected to have especially rigorous and effective internal processes for assessing capital adequacy.⁵

In addition to evaluating the appropriateness of a BHC's capital level given its overall risk profile, supervisory staff should focus on the quality of a BHC's capital and trends in its capital composition. In this regard, the Board's risk-based capital rules state that voting common stockholders' equity, which is the most desirable capital element from a supervisory standpoint, generally should be the dominant element within tier 1 capital, and that banking organizations should avoid overreliance on non-common-equity capital elements.⁶ Accordingly, a BHC should place primary reliance on its common equity, followed by perpetual preferred stock, which is included in equity under generally accepted accounting principles (GAAP) and absorbs losses on a going-concern basis (that is, helps a BHC avoid insolvency despite losses on its assets). Tax-deductible hybrid capital instru-

ments, such as trust preferred securities, provide a limited supplement within tier 1 capital to a BHC's common stock and preferred stock.

In assessing a BHC's capital adequacy, supervisory staff should evaluate the comprehensiveness and effectiveness of management's capital planning. An effective capital planning process requires a banking organization to assess the risks to which it is exposed and its processes for managing and mitigating those risks, evaluate its capital adequacy relative to its risks, and consider the potential impact on its earnings and capital base from current and prospective economic conditions. A BHC's capital planning process should be commensurate with the BHC's size, complexity, and risk profile⁷ and should entail consideration of a variety of factors. The supervisory guidance within SR-09-4 is not intended to describe comprehensively all elements of a BHC's capital planning process, but rather to focus on those factors that a BHC's board of directors should take into account when considering the payment of dividends, stock redemptions, or stock repurchases. Factors that the BHC's board of directors should consider include the following:

1. overall asset quality, potential need to increase reserves and write down assets, and concentrations of credit;
2. potential for unanticipated losses and declines in asset values;
3. implicit and explicit liquidity and credit commitments, including off-balance-sheet and contingent liabilities;
4. quality and level of current and prospective earnings, including earnings capacity under a number of plausible economic scenarios;
5. current and prospective cash flow and liquidity;
6. ability to serve as an ongoing source of financial and managerial strength to depository institution subsidiaries insured by the Federal Deposit Insurance Corporation, including the extent of double leverage⁸ and the condition of subsidiary depository institutions;

5. As discussed in SR-03-9, "Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System," core clearing and settlement organizations are defined as large-value payment system operators and market utilities that provide critical clearing and settlement services for critical financial markets. The term also includes firms that provide clearing and settlement services that are integral to a critical financial market (i.e., their market share is significant enough to present systemic risk in the event of their sudden failure to carry on those activities because there are no immediately viable alternatives). Firms that play significant roles in critical financial markets are those that consistently clear or settle at least five percent of the value of transactions in a critical market.

6. See 12 CFR 225, appendix A, section II.A.1.c.(3).

7. Large BHCs and others with complex risk profiles should have in place robust internal capital adequacy assessment processes. (See sections 4063.0.1 and 4065.0.1 of this manual for more information.) BHCs that use the advanced approaches in the risk-based capital framework may be subject to further requirements in this regard.

8. Double leverage refers to situations in which debt is issued by the parent company and the proceeds are invested in subsidiaries as equity. In this regard, supervisory staff should also consider the impact of any potential overreliance a BHC may have on dividends received from subsidiaries as a source of payment for its liabilities.

7. other risks that affect the BHC's financial condition and are not fully captured in regulatory capital calculations;
8. level, composition, and quality of capital; and
9. ability to raise additional equity capital in prevailing market and economic conditions.

Supervisory findings in the areas discussed in SR-09-4 should be incorporated into the assessment of the "Capital" subcomponent for the BHC's "Financial Condition" rating component in the RFI (Risk Management, Financial Condition, and Impact) rating⁹ assigned to a BHC. See section 4060.9.3 for information that supervisory staff should seek from BHCs in developing this assessment.

4060.9.1.1 Dividends in Cash or Other Value

Crucial to any capital plan are the effects on a BHC's financial condition of the payment of dividends on common stock¹⁰ and other tier 1 capital instruments, as described previously in footnote 1. Consistent with the Board's November 14, 1985, "Policy Statement on the Payment of Cash Dividends" (see section 2020.5, or the *FRRS* at 4-185), a banking organization should have comprehensive policies on dividend payments that clearly articulate the organization's objectives and approaches for maintaining a strong capital position and achieving the objectives of the policy statement. These policies should take into account the potential drain on a BHC's resources posed by the payment not just of cash dividends, but also of non-cash dividends, which can take many different forms (e.g., the distribution of assets to shareholders, particularly insiders, or the assumption or guarantee of certain shareholders' liabilities), other than those in the form of common stock, which generally do not raise supervisory concerns.

When a BHC's board of directors is deciding on the level of dividends to declare,¹¹ it should consider, among other things, the factors discussed above in 4060.9.1. It is particularly important for a banking organization's board of

directors to ensure that the dividend level is prudent relative to the organization's financial position and is not based on overly optimistic earnings scenarios. Supervisory staff should engage in discussions with a BHC on its overall dividend policies and practices as part of the ongoing supervisory assessment of capital adequacy. Moreover, because the period between declaration of a dividend and the payment date may be as much as 60 days, in making a declaration, the board of directors should consider any potential events that may occur before the payment date that could affect its ability to pay while still maintaining a strong financial position.¹²

While many organizations place great importance on consistently paying dividends, a board of directors should strongly consider, after careful analysis of the factors described above under "Review of Capital Adequacy Management" (see section 4060.9.1), reducing, deferring, or eliminating dividends when the quantity and quality of the BHC's earnings have declined or the BHC is experiencing other financial problems, or when the macroeconomic outlook for the BHC's primary profit centers has deteriorated.¹³ As a general matter, the board of directors of a BHC should inform the Federal Reserve and should eliminate, defer, or significantly reduce the BHC's dividends if

1. The BHC's net income available to shareholders for the past four quarters, net of dividends previously paid during that period, is not sufficient to fully fund the dividends;
2. The BHC's prospective rate of earnings retention is not consistent with the BHC's capital needs and overall current and prospective financial condition; or
3. The BHC will not meet, or is in danger of not meeting, its minimum regulatory capital adequacy ratios.

Failure to do so could result in a supervisory finding that the organization is operating in an unsafe and unsound manner.

Moreover, a BHC should inform the Federal

9. See SR-04-18, "Bank Holding Company Rating System" and section 4070.0.

10. This includes dividends paid on common stock by BHCs qualifying under Subchapter S of Chapter 1 of the Internal Revenue Code. For regulatory and supervisory purposes, such dividends are treated the same as those paid by other BHCs.

11. As a general matter, the declaration of a dividend to shareholders establishes a legal obligation to pay that dividend and is recorded as a liability on the balance sheet.

12. Payments on trust preferred securities are not declared. Rather, the BHC must make a decision not to make a payment; typically, this decision must be made 15 days before payment is due.

13. Contractual arrangements typically dictate that a banking organization may not defer dividends on senior instruments (e.g., preferred stock) unless dividends have been fully deferred on more junior instruments (e.g., common stock).

Reserve reasonably in advance of declaring or paying a dividend that exceeds earnings for the period (e.g., quarter) for which the dividend is being paid or that could result in a material adverse change to the organization's capital structure. Declaring or paying a dividend in either circumstance could raise supervisory concerns. Likewise, a BHC should apprise the Federal Reserve reasonably in advance of declaring any material increase in its common stock dividend to ensure that it does not raise safety-and-soundness concerns.

4060.9.1.2 Stock Redemptions and Repurchases

It is an essential principle of safety and soundness that a banking organization's redemption of instruments included in regulatory capital and repurchases of common stock, preferred stock, and other regulatory capital instruments from investors be consistent with the organization's current and prospective capital needs. In assessing such needs, the board of directors and management of a BHC should consider the factors discussed above in section 4060.9.1.

Federal Reserve supervisory staff should continue exercising their supervisory oversight and regulatory authority in evaluating BHCs' capital planning processes, as discussed above, and consulting with BHCs regarding their proposed redemptions and repurchases of common stock, preferred stock, and other regulatory capital instruments. There are explicit regulatory requirements for Federal Reserve review of such transactions in several situations:

1. Certain non-exempted BHCs are required under section 225.4(b)(1) of Regulation Y to notify the Federal Reserve of actions that would reduce a BHC's consolidated net worth by 10 percent or more.¹⁴
2. Under the Board's risk-based capital rule for

BHCs, most instruments included in tier 1 capital¹⁵ with features permitting redemption at the option of the issuing BHC (e.g., perpetual preferred stock and trust preferred securities) may qualify as regulatory capital only if redemption is subject to prior Federal Reserve approval.¹⁶

3. The risk-based capital rule directs BHCs to consult with the Federal Reserve before redeeming any equity or other capital instrument included in tier 1 or tier 2 capital prior to stated maturity, if such redemption could have a material effect on the level or composition of the organization's capital base.¹⁷

In addition, Federal Reserve supervisory staff should exercise the above regulatory authorities, as well as the Federal Reserve's general supervisory and enforcement authority, to prevent a BHC from repurchasing its common stock, preferred stock, trust preferred securities, and other regulatory capital instruments in the market, if such action would be inconsistent with the BHC's prospective capital needs and continued safe and sound operation. BHCs experiencing financial weaknesses, or that are at significant risk of developing financial weaknesses, should consult with the appropriate Federal Reserve supervisory staff before redeeming or repurchasing common stock or other regulatory capital instruments for cash or other valuable consideration. Similarly, any BHC considering expansion, either through acquisitions or through new activities, also generally should consult with the appropriate Federal Reserve supervisory staff before redeeming or repurchasing common stock or other regulatory capital instruments for cash or other valuable consideration.

In evaluating the appropriateness of a BHC's proposed redemption or repurchase of capital instruments, Federal Reserve supervisory staffs

14. Section 225.4(b)(1) of Regulation Y requires that a BHC that is not well capitalized or well managed, or that is subject to any unresolved supervisory issues, provide prior notice to the Federal Reserve for any repurchase or redemption of its equity securities for cash or other value that would reduce by 10 percent or more the BHC's consolidated net worth aggregated over the preceding 12-month period. All repurchases and redemptions within a 12-month period are aggregated for the application of this rule, regardless of any other approval or supervisory consultation process that was followed by the BHC with regard to its repurchases and redemptions of equity securities.

15. See 12 CFR 217.

16. Unlike the process noted above for transactions requiring notification of the Federal Reserve under Regulation Y, such approvals and the consultative process for other repurchases and redemptions are part of the Federal Reserve's general supervisory processes and do not, therefore, require formal applications.

17. See 12 CFR 225, appendix A, section II.(iii). Such consultation by small BHCs subject to the Board's Small Bank Holding Company and Savings and Loan Holding Company Policy Statement ("Small BHC Policy Statement"; see Regulation Y: 12 CFR 225, appendix C), however, is only required for the redemption of instruments included in equity as defined under GAAP—such as common and perpetual preferred stock—and not for other instruments included in regulatory capital solely under the risk-based capital rule.

are directed to consider:

1. the potential losses that a BHC may suffer from the prospective need to increase reserves and write down assets from continued asset deterioration and
2. the BHC's ability to raise additional common stock and other tier 1 capital to replace capital instruments that are redeemed or repurchased.

In addition, supervisory staff should consider the potential negative effects on capital of a BHC

1. replacing common stock with lower-quality forms of regulatory capital (e.g., hybrids or subordinated debt) or
2. redeeming or repurchasing equity and other capital instruments from investors, including selective repurchases or redemptions from insiders, with cash or other value that could be better used to strengthen the BHC's regulatory capital base or its overall financial condition.

Furthermore, to facilitate such supervisory oversight, a BHC should inform Federal Reserve supervisory staff of a redemption or repurchase¹⁸ of common stock or perpetual preferred stock for cash or other value resulting in a net reduction of a BHC's outstanding amount of common stock or perpetual preferred stock below the amount of such capital instrument outstanding at the beginning of the quarter in which the redemption or repurchase occurs. It is not necessary to inform supervisory staff pursuant to SR-09-4 when reductions in a BHC's tier 1 capital during a quarter will result from other causes, such as a reduction of the BHC's retained earnings due to negative earnings.

BHCs should advise Federal Reserve supervisory staff sufficiently in advance of such redemptions and repurchases to provide reasonable opportunity for supervisory review and possible objection should Federal Reserve supervisory staff determine a transaction raises safety-and-soundness concerns. When informing Federal Reserve supervisory staff of redemptions and repurchases, including requests for approval of redemptions under the risk-based capital rule as discussed above, a BHC may provide information either for a proposed transaction or for a

18. Redemptions of most instruments (e.g., preferred stock or trust preferred securities) included in regulatory capital require Federal Reserve approval under the risk-based capital rule, but such redemptions by small BHCs are not required under the small BHC policy statement.

number of transactions within a given quarter on its tier 1 capital composition. Such information should include the dollar amount and percentage breakdown of the BHC's tier 1 capital components (that is, common equity, perpetual preferred stock, and other tier 1 capital instruments), as well as its regulatory capital ratios, at the beginning of the previous quarter and most recent four-quarter period, as well as pro forma changes to its capital composition and ratios resulting from its proposed redemptions or repurchases.

4060.9.2 INSPECTION OBJECTIVES

1. To analyze and document issues discussed above that are present at the BHC and include such documentation in the inspection's workpapers, including those related to supervisory activities.
2. To evaluate the quality of a BHC's capital and the trends in its capital composition.
3. To determine if the BHC has informed and consulted with Federal Reserve supervisory staff sufficiently in advance of
 - a. declaring and paying a dividend that could raise safety-and-soundness concerns (for example, declaring and paying a dividend that exceeds earnings for the period for which the dividend is being paid);
 - b. redeeming or repurchasing regulatory capital instruments when the BHC is experiencing financial weaknesses; or
 - c. redeeming or repurchasing any common stock or perpetual preferred stock that would result in a net reduction as of the end of a quarter in the amount of such equity instruments outstanding compared with the beginning of the quarter in which the redemption or repurchase occurred.
4. To evaluate the comprehensiveness and effectiveness of management's capital planning.

4060.9.3 INSPECTION PROCEDURES¹⁹

Capital Planning

1. Determine if the existing capital level is

19. These procedures are not intended to encompass comprehensively a BHC's capital planning, and are focused on information that may be useful in reviewing the impact of dividends and repurchases or redemptions on capital adequacy. More comprehensive inspection procedures for assessing capital adequacy of BHCs are available in section 4060.3.11.

- adequate for the BHC's risk profile when considering the following items:
- a. the level and trend of adversely classified assets;
 - b. the adequacy of the allowance for loan and lease losses;
 - c. the volume of charged-off loans and recoveries;
 - d. the balance sheet structure and liquidity needs;
 - e. the level and type of concentrations;
 - f. compliance with state and federal capital requirements; and
 - g. composition of elements of capital.
2. Determine if earnings performance enables the BHC to fund its growth, remain competitive in the marketplace, and support its overall risk profile. Consider the level and trend of equity capital to total assets as well as asset and equity growth rates.
 - a. Review the current level of the provision for loan and lease losses.
 - b. Review whether the bank is relying on core earnings or income from non-recurring events.
 - c. Determine if dividends are excessive when compared to current earnings or potential capital needs, or could otherwise result in a material adverse change to the organization's capital structure.
 3. Determine the effect of current capital levels on the future viability of the BHC and its subsidiary depository institutions.
 - a. Assess management's ability to reverse deteriorating trends and to augment capital through earnings.
 - b. Assess the ability of the BHC to raise capital from existing shareholders, issue new capital instruments, or access alternative sources of capital.
 - c. Assess the reasonableness of capital plans.
 5. Assess whether provisions contained in the policies and practices conform to the guidance outlined in the Federal Reserve Board's 1985 dividend policy statement.
 6. Determine whether, and if so, how, the BHC has changed in any way its dividend policy to accommodate the current economic environment.
 7. Assess whether dividends in cash or other value are consistent with the BHC's current and prospective capital needs, including likely future reserve increases and asset write-downs, as well as the feasibility in the near term of the BHC raising additional capital in the market.

Stock Repurchases and Redemptions

8. Review schedule HI-A (Changes in Equity Capital) of the BHC's FR Y-9C report for any changes in components of capital.
9. Review any correspondence from the BHC to the Federal Reserve that indicates any plans to initiate common or preferred stock repurchases or redemptions in the foreseeable future.
10. Review the BHC's strategic plan for any mention of stock repurchases or redemptions.
11. Review the BHC's capital plan for any mention of stock repurchases or redemptions.
12. Discuss with management whether they are in any other way contemplating stock repurchases or redemptions, and if so, what the likely magnitude and timeline of such repurchases will be.
13. Assess whether such repurchases or redemptions foster sound capital positions, especially if the organization is (or could be) experiencing financial weakness.

Dividend in Cash or Other Value

4. Determine whether the BHC has a comprehensive dividend policy at the holding company and for each of its subsidiaries that help it in its capital planning processes.

4060.9.4 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

<i>Subject</i>	<i>Laws¹</i>	<i>Regulations²</i>	<i>Interpretations³</i>	<i>Orders</i>
BHC should serve as a source of financial and managerial strength to its subsidiaries		225.4(a)(1)		
Purchase or redemption by BHC of its own securities		225.4(b)(1)		
Voting common stockholders' equity should be the dominant form of tier 1 capital		225, appendix A, section II.A.1.c.(3)		
Directed advance consultation with Federal Reserve if a redemption of capital prior to stated maturity would materially affect the level or composition of BHC's capital base		225, appendix A, section II.iii		
Board policy on payment of cash dividends			4-877	
Small BHC Policy Statement		225, appendix C		

1. 12 U.S.C., unless specifically stated otherwise.

2. 12 CFR, unless specifically stated otherwise.

3. *Federal Reserve Regulatory Service* reference.

WHAT'S NEW IN THIS REVISED SECTION

Effective January 2016, this section is revised to update the current text to the Capital Planning rule in Regulation Y (12 C.F.R. 225.8). Also see sections 4063.0 and 4065.0 in this manual.

4061.0.1 CAPITAL POSITIONS OF BANK HOLDING COMPANIES

The Federal Reserve has long held the view that bank holding companies (BHCs) generally should operate with capital positions well above the minimum regulatory capital ratios, with the amount of capital held being commensurate with the BHC's risk profile.¹ BHCs should have internal processes for assessing their capital adequacy that reflect a full understanding of their risks and ensure that they hold capital corresponding to those risks to maintain overall capital adequacy.² The Federal Reserve's existing supervisory expectation is that large BHCs should have robust systems and processes that incorporate forward-looking projections of revenue and losses to monitor and maintain their internal capital adequacy.³

The Board adopted amendments to Regulation Y, effective December 30, 2011, which require top-tier large U.S. BHCs having total consolidated assets of \$50 billion or more⁴ (large BHCs) to submit annual capital plans to the Federal Reserve by the 5th of January of a calendar year (or other Federal Reserve Board designated date) for review. For each capital plan cycle beginning 2016 and thereafter, the capital plan must be submitted by April 5th. The amendments to Regulation Y are found in sec-

tion 225.8 of Regulation Y (12 C.F.R. 225.8) and at 76 *Fed. Reg.* 74631 (December 1, 2011), 79 *Fed. Reg.* 64040 (October 27, 2014), and 80 *Fed. Reg.* 75424 (December 2, 2015).⁵ Large BHCs are also required to obtain the Federal Reserve's approval under certain circumstances before making a capital distribution. This section of the manual discusses, in general, some of the significant rule provisions. The rule's text and its preamble should be referred to for its detailed requirements.

The aim of the annual capital plan requirement is to ensure that large BHCs have robust, forward-looking capital planning processes that account for their unique risks, and to help ensure that BHCs have sufficient capital to continue operations throughout times of economic and financial stress. Large BHCs will be expected to have credible plans that show they have sufficient capital so that they can continue to lend to households and businesses, even under adverse conditions, and are well prepared to meet regulatory capital standards agreed to by the Basel Committee on Banking Supervision as they are implemented in the United States. Boards of directors of large BHCs will be required each year to review and approve capital plans before submitting them to the Federal Reserve.

The Federal Reserve annually will evaluate large BHCs' capital adequacy, internal capital adequacy assessment processes, and their plans to make capital distributions, such as dividend payments or stock repurchases. The Federal Reserve may approve dividend increases or other capital distributions only for companies whose capital plans are approved by supervisors and are able to demonstrate sufficient financial strength to operate as successful financial intermediaries under stressed macroeconomic and financial market scenarios, even after making the desired capital distributions.

The rule is designed to (1) establish common minimum supervisory standards for capital planning strategies and processes for certain large BHCs; (2) describe how boards of directors and

1. See 12 C.F.R. parts 217 and 225 (78 *Fed. Reg.* 62018, October 11, 2013). See also this manual's sections 4063.0 and 4065.0.

2. For institutions with less than \$50 billion in total consolidated assets, see SR-09-4, "Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies." (February 29, 2009, revised March 27, 2009).

3. As in footnote 2, see SR-09-4.

4. The calculation of a BHC's consolidated assets for the purposes of this rule consists of the average of a company's total consolidated assets over the previous four most recent consecutive calendar quarters, as reflected on the BHCs "Consolidated Financial Statements for Holding Companies" (FR Y-9C). The rule also applies to any institution that the Board determines, by order, shall be subject in whole or in part to the rule's requirements based on the institution's size, level of complexity, risk profile, scope of operations, or financial condition.

5. The rule also makes conforming changes to section 225.4(b) of Regulation Y (12 CFR 225.4(b)), which currently requires prior notice to the Federal Reserve of certain purchases and redemptions of a BHC's equity securities. Because such approval of certain capital distributions will be separately required in the rule at section 225.8 of Regulation Y, the Board amended section 225.4(b) to provide that it shall not apply to any BHC that is subject to section 225.8.

senior management of these BHCs should communicate such strategies and processes, including any material changes thereto, to the Federal Reserve; and (3) provide the Federal Reserve with an opportunity to review large BHCs' proposed capital distributions under certain circumstances.

4061.0.2 BOARD OF DIRECTOR RESPONSIBILITIES

4061.0.2.1 Annual Capital Planning Requirement

The rule requires a large BHC to develop and maintain a capital plan. At least annually, and prior to the submission of the capital plan to the Federal Reserve, a large BHC's board of directors or a designated committee thereof is required to review the capital plan. The board of directors or designated committee must (1) review the robustness of the holding company's process for assessing capital adequacy, (2) ensure that any deficiencies in the firm's process for assessing capital adequacy are appropriately remedied, and (3) approve the BHC's capital plan.⁶

Robustness of a large BHC's capital adequacy process should be evaluated based on the following elements:

1. A sound risk-management infrastructure that supports the identification, measurement, and assessment of all material enterprise-level risks arising from the exposures and business activities of the BHC;
2. An effective process for translating risk measures into estimates of potential loss over a range of adverse scenarios and environments—using multiple, complementary loss forecasting methodologies—and for aggregating those estimated losses across the BHC;
3. A clear definition of available capital resources and an effective process for forecasting available capital resources (including any forecasted revenues) over the same range of adverse scenarios and environments used for loss forecasting;
4. A process for considering the impact of loss and resource estimates on capital adequacy, in line with the BHC's stated goals for the

level and composition of capital, and taking into account any limitations of the company's capital adequacy process and its components;

5. A process, supported by the BHC's capital policy, to use its assessments of the impact of loss and resource estimates on capital adequacy to make key decisions regarding the current level and composition of capital, specific capital actions, and capital contingency plans as they affect capital adequacy;
6. Robust internal controls governing capital adequacy process components, including sufficient documentation, change control, model validation and independent review, and audit testing; and
7. Effective board and senior management oversight of the BHC's capital adequacy process, including periodic review of capital goals, assessment of the appropriateness of adverse scenarios considered in capital planning, regular review of any limitations and uncertainties in the process, and approval of planned capital actions.

4061.0.2.2 Mandatory Elements of a Capital Plan

A capital plan is defined as a written presentation of a large BHC's capital planning strategies and capital adequacy process that includes certain mandatory elements. These mandatory elements are organized into four main components with relevant subcomponents:

1. An assessment of the expected uses and sources of capital over the planning horizon (at least nine quarters, beginning with the quarter preceding the quarter in which the BHC submits its capital plan) that reflects the BHC's size, complexity, risk profile, and scope of operations, assuming both expected and stressful conditions. The subcomponents include
 - a. estimates of projected revenues, losses, reserves, and pro forma capital levels, including any minimum regulatory capital ratios (for example, leverage, tier 1 risk-based, and total risk-based capital ratios) and any additional capital measures deemed relevant by the BHC, over the planning horizon under expected conditions and under a range of scenarios, including any scenarios provided by the Federal Reserve and at least one BHC stress scenario ;
 - b. a discussion of the results of any stress test required by law or regulation, and an

⁶ As part of this review, the board of directors should consider any remaining uncertainties, limitations, and assumptions associated with the BHC's capital adequacy process.

- explanation of how the capital plan takes these results into account; and
- c. a description of all planned capital actions over the planning horizon.
2. A detailed description of the BHC's process for assessing capital adequacy, including
 - a. a discussion of how the BHC will, under expected and stressful conditions, maintain capital commensurate with its risks, maintain capital above the minimum regulatory capital ratios, and serve as a source of strength to its subsidiary depository institutions; and
 - b. a discussion of how the BHC will, under expected and stressful conditions, maintain sufficient capital to continue its operations by maintaining ready access to funding, meeting its obligations to creditors and other counterparties, and continuing to serve as a credit intermediary.
 3. The BHC's capital policy, which is the BHC's written assessment of the principles and guidelines used for capital planning, capital issuance, usage and distributions, including internal capital goals, the quantitative or qualitative guidelines for dividend and stock repurchases, the strategies for addressing potential capital shortfalls, and the internal governance procedures around capital policy principles and guidelines; and
 4. A discussion of any expected changes to the BHC's business plan that are likely to have a

material impact on the firm's capital adequacy or liquidity. For example, the capital plan should reflect any expected material effects of new lines of business or activities on the BHC's capital adequacy or liquidity, including revenue and losses.

4061.0.2.3 Net Capital Distribution Limitation

The capital plan rule limits the ability of a bank holding company with \$50 billion or more in total consolidated assets to make capital distributions if the bank holding company's net capital issuances are less than the amount indicated in its capital plan.

4061.0.2.4 Data Collection

In connection with its submission of a capital plan to the Federal Reserve, a large BHC is required to provide certain data to the Federal Reserve. Data required by the Federal Reserve may include, but are not limited to, information regarding the BHC's financial condition including its capital, the BHC's structure, assets, risk exposure, policies and procedures, liquidity, and management.

Federal Reserve Supervisory Assessment of Capital Planning and Positions for LISCC Firms and Large and Complex Firms

Section 4063.0

The Federal Reserve issued this guidance to explain its supervisory expectations for capital planning at Large Institution Supervision Coordinating Committee (LISCC) and large and complex bank holding companies and intermediate holding companies of foreign banking organizations, consistent with the broad supervisory expectations set forth in SR-12-17/CA-12-14, “Consolidated Supervision Framework for Large Financial Institutions.”¹ Capital is central to a firm’s ability to absorb unexpected losses and continue to lend to creditworthy businesses and consumers. Therefore, a firm’s processes for managing and allocating its capital resources are critical to its financial strength and resiliency, and also to the stability and effective functioning of the U.S. financial system. The following guidance provides the Federal Reserve’s core capital planning expectations for LISCC and large and complex firms, building upon the capital planning requirements in the Federal Reserve’s capital plan rule and stress test rules.^{2,3}

The guidance outlines capital planning expectations for:

- Governance
- Risk management
- Internal controls
- Capital policy
- Scenario design, and
- Projection methodologies.

Further, the guidance includes several appendices that detail supervisory expectations on a firm’s capital planning process. This guidance largely consolidates the Federal Reserve’s existing capital planning guidance, including:

1. The term “capital planning process,” as used herein, which aligns with terminology in SR-12-17/CA-12-14, is equivalent to the term “capital adequacy process” used in other Federal Reserve documents.

2. For the capital plan rule, refer to section 225.8 of Regulation Y (12 C.F.R. 225.8). Regulation Q (12 C.F.R. 217) establishes minimum capital requirements and overall capital adequacy standards for Federal Reserve-regulated institutions. Regulation YY (12 C.F.R. 252) establishes capital stress testing requirements for bank holding companies with total consolidated assets of \$50 billion or more, including requirements to participate in the Federal Reserve’s annual supervisory stress test and conduct their own internal capital stress tests.

3. With the issuance of SR-15-18, SR-99-18, “Assessing Capital Adequacy in Relation to Risk at Large Banking Organizations and Others with Complex Risk Profiles,” is superseded. In addition, SR-09-4, “Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies,” is superseded with respect to firms subject to this guidance.

- Capital Planning at Large Bank Holding Companies: Supervisory Expectations and Range of Current Practice (August 2013)⁴
- Comprehensive Capital Analysis and Review 2015 Summary Instructions and Guidance (October 2014)⁵
- Instructions for the Capital Assessments and Stress Testing information collection (Reporting Form FR Y-14A), (OMB No. 7100-0341)⁶
- SR-11-7, “Supervisory Guidance on Model Risk Management” (Refer to section 2126.0 of this manual)
- SR-12-7, “Supervisory Guidance on Stress Testing for Banking Organizations with More Than \$10 Billion in Total Consolidated Assets”
- SR-12-17/CA-12-14, “Consolidated Supervision Framework for Large Financial Institutions” (Refer to section 2124.05 of this manual) (Refer to SR-15-18 and its attachment.)

4063.0.1 FEDERAL RESERVE GUIDANCE ON SUPERVISORY ASSESSMENT OF CAPITAL PLANNING AND POSITIONS FOR LISCC FIRMS AND LARGE AND COMPLEX FIRMS (OMB CONTROL NUMBERS 7100-0341 AND 7100-0342)

I. Introduction

This guidance (the attachment to SR-15-18) provides the Federal Reserve’s core capital planning expectations for firms subject to the Large Institution Supervision Coordinating Committee⁷ (LISCC) framework and other large and complex firms, building upon the capital planning requirements included in the Board’s capital plan rule and stress test rules. This guidance

4. Available at www.federalreserve.gov/bankinforeg/bcreg20130819a1.pdf.

5. Available at www.federalreserve.gov/newsevents/press/bcreg/bcreg20141017a1.pdf.

6. Available at www.federalreserve.gov/apps/reportforms/reportdetail.aspx?sOoYJ+5BzDa2AwLR/gLe5DPHQFttuq/4.

7. The LISCC framework is designed to materially increase the financial and operational resiliency of systemically important financial institutions to reduce the probability of, and cost associated with, their material financial distress or failure. See www.federalreserve.gov/bankinforeg/large-institution-supervision.htm.

outlines capital planning expectations⁸ for these firms in the following areas:

- Governance
- Risk management
- Internal controls
- Capital policy
- Incorporating stressful conditions and events, and
- Estimating impact on capital positions.

Further, this guidance provides detailed supervisory expectations on a firm's capital planning process in the following appendices:

- A. Use of Models and Other Estimation Approaches
- B. Model Overlays
- C. Use of Benchmark Models in the Capital Planning Process
- D. Sensitivity Analysis and Assumptions Management
- E. Role of the Internal Audit Function in the Capital Planning Process
- F. Capital Policy
- G. Scenario Design
- H. Risk-weighted Asset (RWA) Projections
- I. Operational Loss Projections

This guidance applies to U.S. bank holding companies and intermediate holding companies of foreign banking organizations that are either (i) subject to the LISCC framework (referred to as a "LISCC Firm") or (ii) have total consolidated assets of \$250 billion or more or consolidated total on-balance sheet foreign exposure of \$10 billion or more (referred to in this guidance as a "Large and Complex Firm").^{9,10} The guid-

ance is effective immediately for bank holding companies that are subject to the capital plan rule as of January 1, 2016. The guidance will become effective for intermediate holding companies beginning on January 1, 2017, which is the date on which the capital plan rule applies to these firms.

The Federal Reserve has different expectations for sound capital planning and capital adequacy depending on the size, scope of operations, activities, and systemic importance of a firm. Concurrently with issuance of this guidance, the Federal Reserve is issuing separate guidance for U.S. bank holding companies and intermediate holding companies that have total consolidated assets of at least \$50 billion but less than \$250 billion, have consolidated total on-balance sheet foreign exposure of less than \$10 billion, and are not otherwise subject to the LISCC framework (referred to as a "Large and Noncomplex Firm"). This separate guidance clarifies that expectations for LISCC Firms and Large and Complex Firms are higher than the expectations for Large and Noncomplex Firms. (See this manual's section 4065.0.)

Within the group of firms subject to this guidance, the Federal Reserve has significantly heightened expectations for the LISCC Firms. This guidance sets forth only minimum expectations, and LISCC Firms are consistently expected to exceed those minimum standards and have the most sophisticated, comprehensive, and robust capital planning practices for all of their portfolios and activities.

II. Regulatory Requirements for Capital Positions and Planning

Sound capital planning for any firm begins with adherence to all applicable rules and regulations relating to capital adequacy. Three Federal Reserve regulations form the basis of the regulatory framework for capital positions and capital planning:

- (1) Regulation Q (12 C.F.R. 217), Capital Adequacy Requirements for Board-regulated

sure equals total cross-border claims less claims with head office or guarantor located in another country plus redistributed guaranteed amounts to the country of head office or guarantor plus local country claims on local residents plus revaluation gains on foreign exchange and derivative products, calculated as of the most recent year-end in accordance with the Federal Financial Institutions Examination Council (FFIEC) 009 Country Exposure Report.

10. This guidance does not apply to nonbank financial companies designated by the Financial Stability Oversight Council for supervision by the Board of Governors.

8. Note that these expectations build upon the capital planning requirements set forth in the Board's capital plan rule and stress test rules (12 C.F.R. 225.8; 12 C.F.R. 252, subparts E and F). Other relevant rules pertaining to the Board's regulatory regime for capital planning and positions are described above in Section II, "Regulatory Requirements for Capital Positions and Planning." The Federal Reserve may not conduct or sponsor, and an organization (or a person) is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for this guidance are OMB No. 7100-0341 and OMB No. 7100-0342.

9. Total consolidated assets equals the amount of total assets reported on the firm's Consolidated Financial Statements for Holding Companies (FR Y-9C), measured as an average over the preceding four quarters. If a firm has not filed the FR Y-9C for each of the four most recent consecutive quarters, a firm's total consolidated assets are measured as the average of its total consolidated assets, as reported on the FR Y-9C, for the most recent quarter or consecutive quarters, as applicable. Consolidated total on-balance sheet foreign expo-

- Institutions;
- (2) Regulation YY (12 C.F.R. 252), Enhanced Prudential Standards; and
 - (3) Section 225.8 of Regulation Y (12 C.F.R. 225.8, also known as the capital plan rule).

Regulation Q establishes minimum capital requirements and overall capital adequacy standards for Federal Reserve-regulated institutions. Among other things, Regulation YY establishes capital stress testing requirements for bank holding companies with total consolidated assets of \$50 billion or more, including requirements to participate in the Federal Reserve’s annual supervisory stress test and conduct their own internal capital stress tests. The capital plan rule establishes general capital planning requirements for a bank holding company with total consolidated assets of \$50 billion or more and requires a bank holding company to develop an annual capital plan that is approved by its board of directors.

This guidance provides the Federal Reserve’s core capital planning expectations for firms subject to this guidance, building upon the capital planning requirements in the Federal Reserve’s capital plan rule and stress test rules.¹¹

III. Capital Planning Expectations

Capital is central to a firm’s ability to absorb unexpected losses and continue to lend to credit-worthy businesses and consumers. A firm’s capital planning processes are critical to its financial strength and resiliency. At LISCC Firms and Large and Complex Firms, sound capital planning is also critical to the stability and effective functioning of the U.S. financial system.

SR-12-17/CA-12-14, “Consolidated Supervision Framework for Large Financial Institutions,” outlines core expectations for sound capital planning for bank holding companies with total consolidated assets of \$50 billion or more. This capital planning and positions guidance provides additional details around the Federal Reserve’s core capital planning expectations for LISCC Firms and Large and Complex Firms, building on the capital planning requirements included in the capital plan rule and the Board’s stress test rules.¹² A firm should maintain a

sound capital planning process on an ongoing basis, including in between submissions of its annual capital plan.¹³

A. Governance

The Federal Reserve expects a firm to have sound governance over its capital planning process. In general, senior management should establish the capital planning process and the board of directors should review and periodically approve that process.

1. Board of Directors

A firm’s board of directors is ultimately responsible and accountable for the firm’s capital-related decisions and for capital planning. The firm’s capital planning should be consistent with the strategy and risk appetite set by the board and with the firm’s risk levels, including how risks at the firm may emerge and evolve under stress. The board must annually review and approve the firm’s capital plan.¹⁴

The board should direct senior management to provide a briefing on their assessment of the firm’s capital adequacy at least quarterly, and whenever economic, financial, or firm-specific conditions warrant a more frequent update. The briefing should describe whether current capital levels and planned capital distributions remain appropriate and consistent with capital goals (see Section III.D, “Capital Policy”). In their briefing, senior management should also highlight for the board any problem areas related to capital planning identified by senior management, internal audit, or supervisors.

The board should hold senior management accountable for providing sufficient information on the firm’s material risks and exposures to inform board decisions on capital adequacy and actions, including capital distributions. Information provided to the board should be clear, accurate, and timely. The board should direct senior management to provide this information at least quarterly and whenever economic, financial, or firm-specific conditions warrant a more frequent update. The information presented to the board

11. Refer to footnote 3.

12. The capital planning process described in this guidance is broadly equivalent to an internal capital adequacy assessment process (ICAAP) under the Federal Reserve’s advanced approaches capital guidelines. The expectations articulated in this document are consistent with the U.S. federal banking agencies’ supervisory guidance relating to the ICAAP (see 73 Fed. Reg. 44620 (July 31, 2008)).

13. The term “capital planning process” used herein, which aligns with terminology in SR-12-17/CA-12-14, is equivalent to the term “capital adequacy process” used in other Federal Reserve documents.

14. 12 C.F.R. 225.8(e)(1)(iii).

should include consideration of a number of factors, such as

- macro-economic conditions and relevant market events;
- current capital levels relative to budgets and forecasts;
- post-stress capital goals and targeted real time capital levels (see section III.D, “Capital Policy”);
- enterprise-wide and line-of-business performance;
- expectations from stakeholders (including shareholders, regulators, investors, lenders, counterparties, and rating agencies);
- potential sources of stress to the firm’s operating performance; and
- risks that may emerge only under stressful conditions.

After receiving the information, the board should be in a position to understand the major drivers of the firm’s projections under a range of conditions, including baseline and stress scenarios.

The board should direct senior management to provide information about the firm’s estimation approaches, model overlays, and assessments of model performance (see Appendix A, “Use of Models and Other Estimation Approaches,” Appendix B, “Model Overlays,” and Appendix C, “Use of Benchmark Models in the Capital Planning Process”). The board should also receive information about uncertainties around projections of capital needs or limitations within the firm’s capital planning process to understand the impact of these weaknesses on the process. This information should include key assumptions and the analysis of sensitivity of a firm’s projections to changes in the assumptions (see Appendix D, “Sensitivity Analysis and Assumptions Management”). The board should incorporate uncertainties in projections and limitations in the firm’s capital planning process into its decisions on capital adequacy and capital actions. It should also review and approve mitigating steps to address capital planning process weaknesses.

The board should direct senior management to establish sound controls for the entire capital planning process. The board should approve policies related to capital planning, and review them annually. The board should also approve capital planning activities and strategies. The board of directors should maintain an accurate

record of its meetings pertaining to the firm’s capital planning process.

2. Senior Management

Senior management should direct staff to implement board-approved capital policies, capital planning activities, and strategies in an effective manner. Senior management should make informed recommendations to the board regarding the firm’s capital planning and capital adequacy, including post-stress capital goals and capital distribution decisions. Senior management’s proposed capital goals and capital distributions should have analytical support and take into account the expectations of important stakeholders, including shareholders, rating agencies, counterparties, depositors, creditors, and supervisors.

Senior management should design and oversee the implementation of the firm’s capital planning process; identify and assess material risks and use appropriate firm-specific scenarios in the firm’s stress test; monitor and assess capital planning practices to identify limitations and uncertainties and develop remediation plans; understand key assumptions used throughout a firm’s capital planning process and assess the sensitivity of the firm’s projections to those assumptions (see Appendix D, “Sensitivity Analysis and Assumptions Management”); and review the capital planning process at least quarterly.

Senior management should establish a process for independent review of the firm’s capital planning process, including the elements outlined in this guidance. The independent review process should be designed to identify the weaknesses and limitations of the capital planning process and the potential impact of those weaknesses on the process. Senior management should also develop remediation plans for any identified weaknesses affecting the reliability of capital planning results. Both the specific identified weaknesses and the remediation plans should be reported to the board of directors in a timely manner.

B. Risk Management

A firm should have a risk management infrastructure that appropriately identifies, measures, and assesses material risks and provides a strong foundation for capital planning.¹⁵ This risk management infrastructure should be supported by comprehensive policies and procedures, clear

and well-established roles and responsibilities, and strong and independent internal controls. In addition, the risk management infrastructure should be built upon sound information technology and management information systems. The Federal Reserve’s supervisory assessment of the sufficiency of a firm’s capital planning process will depend in large part on the effectiveness of the firm’s risk management infrastructure and the strength of its process to identify unique risks under normal and stressful conditions, as well as on the strength of its overall governance and internal control processes.

1. Risk Identification and Assessment Process

A firm’s risk identification process should include a comprehensive assessment of risks stemming from its unique business activities and associated exposures. The assessment should include on-balance sheet assets and liabilities, off-balance sheet exposures, vulnerability of the firm’s earnings, and other major firm-specific determinants of capital adequacy under normal and stressed conditions. This assessment should also capture those risks that only materialize or become apparent under stressful conditions.

The specifics of the risk identification process will differ across firms given differences in organizational structure, business activities, and size and complexity of operations. However, the risk identification process at all firms subject to this guidance should be dynamic, inclusive, and comprehensive, and drive the firm’s capital adequacy analysis. A firm should

- evaluate material risks across the enterprise to ensure comprehensive risk capture on an ongoing basis;
- establish a formal risk identification process and evaluate material risks at least quarterly;
- actively monitor its material risks; and
- use identified material risks to inform key aspects of the firm’s capital planning, including the development of stress scenarios, the assessment of the adequacy of post-stress capital levels, and the appropriateness of potential capital actions in light of the firm’s capital objectives.

A firm should be able to demonstrate how material risks are accounted for in its capital planning process. For risks not well captured by scenario analysis, the firm should clearly articulate how the risks are otherwise captured and addressed in the capital planning process and

factored into decisions about capital needs and distributions. The firm should also be able to identify risks that may be difficult to quantify and explain how these risks are addressed in the capital planning process. The firm should appropriately segment risks beyond generic categories such as credit risk, market risk, and operational risk.

The Federal Reserve expects a firm to seek input from multiple stakeholders across the organization (for example, senior management, finance and risk professionals, front office and line-of-business leadership) in identifying its material risks. In addition, a firm should update its risk assessment at least quarterly to reflect changes in exposures, business activities, and its broader operating environment.

2. Risk Measurement and Risk Materiality

A firm should have a sound risk measurement process that informs senior management about the size and risk characteristics of exposures and business activities under both normal and stressful operating conditions. A firm is generally expected to use quantitative approaches supported by expert judgment, as appropriate, for risk-measurement.

Identified weaknesses, limitations, biases, and assumptions in the firm’s risk measurement processes should be assessed for their potential impact on the integrity of a firm’s capital planning process (see Appendix D, “Sensitivity Analysis and Assumptions Management”). A firm should have a process in place for determining materiality in the context of material risk identification and capital planning. This process should include a sound analysis of relevant quantitative and qualitative considerations, including, but not limited to, the firm’s risk profile, size, and complexity, and their effects on the firm’s projected regulatory capital ratios in stressed scenarios.¹⁶

A firm should identify how and where its material risks are accounted for within the capital planning process. The firm should be able to specify material risks that are captured in its scenario design, the approaches used to estimate the impact on capital, and the risk drivers asso-

16. For simplicity, the terms “quantitative” and “qualitative” are used to describe two different types of approaches, with the recognition that all quantitative estimation approaches involve some qualitative/judgmental aspects, and qualitative estimation approaches produce quantitative output.

ciated with each material risk.

As part of its risk measurement processes, a firm should identify and measure risk that is inherent to its business practices and closely assess the reliability of assumptions about risk reduction resulting from risk transfer or risk mitigation techniques (see Appendix D, “Sensitivity Analysis and Assumptions Management”). Specifically, the firm should critically assess the enforceability and effectiveness of any guarantees, netting, and collateral agreements. Assumptions about accessibility and valuation of collateral exposures should also be closely reviewed for reliability given the likelihood that asset values will change rapidly in a stressed market.

C. Internal Controls

A firm should have a sound internal control framework that helps ensure that all aspects of the capital planning process are functioning as designed and result in sound assessments of the firm’s capital needs. The framework should include

- an independent internal audit function;
- independent review and validation practices; and
- integrated management information systems, effective reporting, and change control processes.

A firm’s internal control framework should support its entire capital planning process, including: the sufficiency of and adherence to policies and procedures; risk identification, measurement, and management practices and systems used to produce input data; and the models, management overlays, and other methods used to generate inputs to post-stress capital estimates. Any part of the capital planning process that relies on manual procedures should receive heightened attention. The internal control framework should also assess the aggregation and reporting process used to produce reports to senior management and to the board of directors and the process used to support capital adequacy recommendations to the board.

In addition, the control framework should include an evaluation of the firm’s process for integrating the separate components of the capital planning process at the enterprise-wide level.

1. Comprehensive Policies, Procedures, and Documentation for Capital Planning

A firm should have policies and procedures that support consistent and repeatable capital planning processes.¹⁷ Policies and procedures should describe the capital planning process in a manner that informs internal and external stakeholders of the firm’s expectations for internal practices, documentation, and business line controls. The firm’s documentation should be sufficient to provide relevant information to those making decisions about capital actions. The documentation should also allow parties unfamiliar with a process or model to understand generally how it operates, as well as its main limitations, key assumptions, and uncertainties.

Policies and procedures should also clearly identify roles and responsibilities of staff involved in capital planning and provide accountability for those responsible for the capital planning process. A firm should also have an established process for policy exceptions. Such exceptions should be approved by the appropriate level of management based upon the gravity of the exception. Policies and procedures should reflect the firm’s current practices, and be reviewed and updated as appropriate, but at least annually. A firm should maintain evidence that management and staff are adhering to policies and procedures in practice.

A firm’s documentation should cover key aspects of its capital planning process, including its risk-identification, measurement and management practices and infrastructure; methods to estimate inputs to post-stress capital ratios; the process used to aggregate estimates and project capital needs; the process for making capital decisions; and governance and internal control practices. A firm’s capital planning documentation should include detailed information to enable independent review of key assumptions, stress testing outputs, and capital action recommendations.

2. Model Validation and Independent Review of Estimation Approaches

Models used in the capital planning process should be reviewed for suitability for their intended uses. A firm should give particular consideration to the validity of models used for

17. See Instructions for the Capital Planning and Stress Testing Information Collection (Reporting Form FR Y-14A), Appendix A (Supporting Documentation), available at www.federalreserve.gov/apps/reportforms/reportdetail.aspx?sOoYJ+5BZDa2AwLR/gLe5DPhQfttuq/4.

calculating post-stress capital positions. In particular, models designed for ongoing business activities may be inappropriate for estimating losses, revenue, and expenses under stressed conditions. If a firm identifies weaknesses or uncertainties in a model, the firm should make adjustments to model output if the findings would otherwise result in the material understatement of capital needs (see Appendix B, “Model Overlays”). If the deficiencies are critical, the firm should restrict the use of the model, apply overlays, or avoid using the model entirely.

A firm should independently validate or otherwise conduct effective challenge of models used in internal capital planning, consistent with supervisory guidance on model risk management.¹⁸ The model review and validation process should include an evaluation of conceptual soundness of models and ongoing monitoring of the model performance. The firm’s validation staff should have the necessary technical competencies, sufficient stature within the organization, and appropriate independence from model developers and business areas to provide a critical and unbiased evaluation of the estimation approaches.

A firm should maintain an inventory of all estimation approaches used in the capital planning process, including models used to produce projections or estimates used by the models that generate final loss, revenue, expense, and capital projections.¹⁹ Material models should receive greater attention (see Appendix C, “Use of Benchmark Models in the Capital Planning Process”).²⁰ The intensity and frequency of validation work should be a function of the importance of those models in generating estimates of post-stress capital.

Not all models can be fully validated prior to use in capital planning. However, a firm should conduct a conceptual soundness review of all models prior to their use in capital planning. If such a conceptual soundness review is not possible, the absence of that review should be made transparent to users of model output and the firm should determine whether the use of com-

pensating controls (such as conservative adjustments) are warranted.

Further, a firm should treat output from models for which there are model risk management shortcomings with caution. In addition, a firm should have compensating controls for known model uncertainties and apply well supported conservative adjustments to model results, as appropriate.

A firm should ensure that benchmark or challenger models that contribute to post-stress capital estimates or are otherwise used explicitly in the capital planning process are identified and subject to validation (see Appendix C, “Use of Benchmark Models in the Capital Planning Process”).

3. Management Information Systems and Change Control Processes

A firm should have internal controls that ensure the integrity of reported results and that make certain the firm is identifying, documenting, reviewing, and tracking all material changes to the capital planning process and its components. The firm should ensure that such controls exist at all levels of the capital planning process. Specific controls should ensure

- sufficiently sound management information systems to support the firm’s capital planning process;
- comprehensive reconciliation and data integrity processes for key reports;
- the accurate and complete presentation of capital planning process results, including a description of adjustments made to compensate for identified weaknesses; and
- that information provided to senior management and the board is accurate and timely.

Many of the processes used to assess capital adequacy, including models, data, and management information systems, are tightly integrated and interdependent. As a result, a firm should ensure consistent change control oversight across the entire firm, in line with existing supervisory guidance.²¹ A firm should establish and maintain a policy describing minimum internal con-

18. See SR-11-7, “Supervisory Guidance on Model Risk Management.” The term “effective challenge” means critical review by objective, informed parties who have the proper incentives, competence, and influence to challenge the model and its results.

19. The definition of a model covers quantitative approaches whose inputs are partially or wholly qualitative or based on expert judgment, provided that the output is quantitative in nature.

20. Materiality of the model is a function of both the importance of the business or portfolio assessed and the impact of the model on the firm’s overall results.

21. Federal Financial Institutions Examination Council, “IT Examination Handbook—Operations Booklet,” available at http://ithandbook.ffiec.gov/ITBooklets/FFIEC_ITBooklet_Operations.pdf. See also SR-15-3, “FFIEC Information Technology Examination Handbook.”

trol standards for managing change in capital planning process policies and procedures, model development, information technology, and data. Control standards for these areas should address risk, testing, authorization and approval, timing of implementation, post-installation verification, and recovery, as applicable.

4. Internal Audit Function

Internal audit should play a key role in evaluating capital planning and the elements described in this guidance to ensure that the entire process is functioning in accordance with supervisory expectations and the firm's policies and procedures. Internal audit should review the manner in which deficiencies are identified, tracked, and remediated. Furthermore, internal audit should ensure appropriate independent review and challenge is occurring at all key levels within the capital planning process.

As discussed further in Appendix E, "Role of the Internal Audit Function in the Capital Planning Process," internal audit staff should have the appropriate competence and influence to identify and escalate key issues. All deficiencies, limitations, weaknesses and uncertainties identified by the internal audit function that relate to the firm's capital planning process should be reported to senior management, and material deficiencies should be reported to the board of directors (or the audit committee of the board) in a timely manner.²²

D. Capital Policy

A capital policy is a firm's written assessment of the principles and guidelines used for capital planning, issuance, usage, and distributions.²³ This includes internal post-stress capital goals (as discussed in more detail below and in Appendix F, "Estimating Impact on Capital Positions") and real-time targeted capital levels; guidelines for dividend payments and stock repurchases; strategies for addressing potential capital shortfalls; and internal governance responsibilities and procedures for the capital policy. The capital policy must be approved by the firm's board

of directors or a designated committee of the board.²⁴

The capital policy should be reevaluated at least annually and revised as necessary to address changes to the firm's business strategy, risk appetite, organizational structure, governance structure, post-stress capital goals, real-time targeted capital levels, regulatory environment, and other factors potentially affecting the firm's capital adequacy.

A capital policy should describe the firm's capital adequacy decision-making process, including the decision-making process for common stock dividend payments or stock repurchases.²⁵ The policy should incorporate actionable protocols, including governance and escalation, in the event a post-stress capital goal, real-time targeted capital level, or other early warning metric is breached. The policy should also include elements such as

- roles and responsibilities of key parties, including those responsible for producing analytical materials, reviewing the analysis, and making capital distribution recommendations and decisions;
- factors and key metrics that influence the size, timing, and form of capital actions, and the analytical materials used in making capital action decisions; and
- the frequency with which capital adequacy will be evaluated and the analysis that will be considered in the determination of capital adequacy, including the specific circumstances that activate the contingency plan.

1. Post-Stress Capital Goals

A firm should establish post-stress capital goals that are aligned with its risk appetite and risk profile, its ability to act as a financial intermediary in times of stress, and the expectations of internal and external stakeholders. Post-stress capital goals should be calibrated based on the firm's own internal analysis, independent of regulatory capital requirements, of the minimum level of post-stress capital the firm has

24. 12 C.F.R. 225.8(e)(1)(iii).

25. Consistent with the Board's November 14, 1985, Policy Statement on the Payment of Cash Dividends, the principles of which are incorporated into this guidance, firms should have comprehensive policies on dividend payments that clearly articulate the firm's objectives and approaches for maintaining a strong capital position and achieving the objectives of the policy statement. See *Bank Holding Company Supervision Manual*, section 2020.5.1.1, *Intercompany Transactions (Dividends)*, available at www.federalreserve.gov/boarddocs/supmanual/bhc/bhc.pdf.

22. For additional information on supervisory expectations for internal audit, see SR-13-1, "Supplemental Policy Statement on the Internal Audit Function and Its Outsourcing."

23. 12 C.F.R. 225.8(d)(7).

deemed necessary to remain a going concern over the planning horizon. A firm should also determine targets for real-time capital ratios and capital levels that ensure that capital ratios and levels would not fall below the firm's internal post-stress capital goals (including regulatory minimums) under stressful conditions at any point over the planning horizon. For more details, see Appendix F, "Capital Policy."

E. Incorporating Stressful Conditions and Events

As part of its capital planning process, a firm should incorporate appropriately stressful conditions and events that could adversely affect the firm's capital adequacy into its capital planning. As part of its capital plan, a firm must use at least one scenario that stresses the specific vulnerabilities of the firm's activities and associated risks, including those related to the company's capital adequacy and financial condition.²⁶ More generally, as part of its ongoing capital adequacy assessment, a firm should use multiple scenarios to assess a broad range of risks, stressful conditions, or events that could impact the firm's capital adequacy.

1. Scenario design

A firm should develop complete firm-specific scenarios that focus on the specific vulnerabilities of the firm's risk profile and operations. The scenario design process should be directly linked to the firm's risk identification process and associated risk assessment. For those aspects of risks not well captured by scenario analysis, the firm should clearly articulate how the risks are otherwise captured and addressed in the capital planning process and factored into decisions about capital needs and distributions.

In developing its scenarios, the firm should recognize that multiple stressful conditions or events can occur simultaneously or in rapid succession. The firm should also consider the cumulative effects of stressful conditions, including possible interactions among the conditions and second-order or "knock-on" effects.

When identifying and developing the specific set of stressful conditions to capture in its stress scenarios, the firm should engage a broad range of internal stakeholders, such as risk experts, business managers, and senior management, to ensure the process comprehensively takes into

account the full range of vulnerabilities specific to the firm.

2. Scenario narrative

A firm's stress scenario should be supported by a detailed narrative describing how the scenario addresses the firm's particular material risks and vulnerabilities, and how the paths of the scenario variables relate to each other. The narrative should describe the key attributes of the scenario, including any stress events in the scenario, such as counterparty defaults, large operational risk related events, and ratings downgrades. For more details, see Appendix G, "Scenario Design."

F. Estimating Impact on Capital Positions

A firm should employ estimation approaches that allow it to project the impact on capital positions of various types of stressful conditions and events. The firm's stress testing practices should capture the potential increase in losses or decrease in pre-provision net revenue (PPNR) that could result from the firm's risks, exposures, and activities under stressful scenarios. A firm should estimate losses, revenues, expenses, and capital using a sound method that relates macroeconomic and other risk drivers to its estimates. The firm should be able to identify the manner in which key variables, factors, and events in a scenario affect losses, revenue, expenses, and capital over the planning horizon. Projections of losses and PPNR should be done at a level of granularity that allows for the appropriate differentiation of risk drivers, while balancing practical constraints such as data limitations (see Appendix A, "Use of Models and Other Estimation Approaches" and Appendix D, "Sensitivity Analysis and Assumptions Management").

The balance sheet projection process should establish and incorporate the relationships among revenue, expense, and on- and off-balance sheet exposures under stressful conditions, including new originations, purchases, sales, maturities, prepayments, defaults, and other borrower and depositor behavior considerations. A firm should also ensure that changes in its asset mix and resulting RWAs are consistent with PPNR and loss estimates. A firm should be able to identify key risk drivers, variables or factors in the sce-

26. 12 C.F.R. 225.8(e)(2).

narios that generate increased losses, reduced revenues, and changes to the balance sheet and RWAs over the planning horizon (see Appendix H, “Risk-weighted Asset (RWA) Projections”).

1. Loss estimation

A firm should estimate losses using a sound method that relates macroeconomic and other risk drivers to losses. A firm should empirically demonstrate that a strong relationship exists between the variables used in loss estimation and prior losses. When using supervisory scenarios, a firm should project additional scenario variables beyond those included in the supervisory scenarios if the additional variables would be more directly linked to particular portfolios or exposures. A firm should include a variety of loss types in its stress tests based on the firm’s exposures and activities. Loss types should include retail and wholesale credit risk losses, credit and fair value losses on securities, market and default risk on trading and counterparty exposures, and operational-risk losses.

a. Credit risk losses on loans and securities

A firm should develop sound methods to estimate credit losses under stress that take into account the type and size of portfolios, risk characteristics, and data availability. A firm should understand the key characteristics of its loss estimation approach. In addition, a firm’s reserves for each quarter of the planning horizon, including the last quarter, should be sufficient to cover estimated loan losses consistent with generally accepted accounting standards. A firm should account for the timing of loss recognition in setting the appropriate level of reserves at the end of each quarter of the planning horizon.

A firm should test credit-sensitive securities for potential other-than-temporary impairment (OTTI) regardless of current impairment status. The threshold for determining OTTI for structured products should be based on cash-flow analysis and credit analysis of underlying obligors.

b. Fair-value losses on loans and securities

As applicable, a firm should project changes in

the fair value of loans and available-for-sale securities (and impaired held-to-maturity securities). The projections should be based on relevant risk drivers, such as changes in credit spreads and interest rates. The firm should ensure that the risk drivers appropriately capture underlying risk characteristics of the loan or security, including duration and the credit risk of the underlying collateral or issuer.

c. Market and default risks on trading and counterparty exposures

A firm should project how the stress affects mark-to-market values and the default risk of its trading and counterparty exposures. A firm should capture all of its trading positions and counterparty exposures, identify all relevant risk factors, and employ sound revaluation methods. As part of its scenario analysis, as described in greater detail in section III.E of this guidance “Incorporating Stressful Conditions,” a firm should use scenarios that severely stress the firm’s mark-to-market positions and account for the firm’s idiosyncratic risks.

d. Operational-risk losses

A firm should maintain a sound process for estimating operational risk losses in its capital planning process. Operational losses can rise from various sources, including inadequate or failed internal processes, people, and systems, or from external events (see Appendix I, “Operational Loss Projections”).

A firm should have a structured, transparent, and repeatable framework in place to develop credible loss projections under stress that takes into account the differences in loss characteristics of different types of operational loss events. The approaches used to project operational losses should be well supported and include scenario analysis.

2. PPNR

In projecting PPNR, a firm should take into account not only its current positions, but also how its activities, business strategy, and revenue drivers may evolve over time under the varying circumstances and operating environments. The firm should ensure that the various PPNR components, including net interest income, non-interest income and non-interest expense, and other key items projected by the firm such as

balance sheet positions, RWA, and losses, are projected in a manner that is internally consistent.

The ability to effectively project net interest income is dependent upon the firm's ability to identify and aggregate current positions and their attributes; project future changes in accruing balances due to a variety of factors; and appropriately translate the impact of these factors and relevant interest rates into net interest income based on assumed conditions. Accordingly, a firm's current portfolio of interest-bearing assets and liabilities should serve as the foundation for its forward-looking estimates of net interest income. Beginning positions, positions added during the planning horizon, and the expected behavior of those positions are critical determinants of net interest income. A firm should have the ability to capture these dynamic relationships under its stress scenarios, and should ensure all related assumptions are well supported (see Appendix D, "Sensitivity Analysis and Assumptions Management").

Non-interest income is derived from a diverse set of sources, including fees, certain realized gains and losses, and mark-to-market income. Non-interest income generally is more susceptible to rapid changes than net interest income, especially if certain market measures move sharply. A firm's projections should incorporate material factors that could affect the generation of non-interest income under stress, including the firm's business strategy, the competitive landscape, and changing regulations.

Non-interest expenses include both expenses that are likely to vary with certain stressful conditions and those that are not. Projections of expenses that are closely linked to revenues or balances should vary with projected changes in revenue or balance sheet levels. Non-interest expense should be projected using either quantitative estimation methods or well-supported judgment, depending on the underlying drivers of the expense item.

3. Aggregating Estimation Results

A firm should have well-documented processes for projecting the size and composition of on- and off-balance sheet positions and RWAs over the planning horizon that feed in to the wider capital planning process (see Appendix H, "Risk-weighted Asset (RWA) Projections").

A firm should have a consistently executed process for aggregating enterprise-wide stress test projections of losses, revenues, and expenses, including estimating on- and off-balance

sheet exposures, and RWAs, and for calculating post-stress capital positions and ratios. The aggregation system should be able to bring together data and information across business lines, portfolios, and risk types and should include the data systems and sources, data reconciliation points, data quality checks, and appropriate internal control points to ensure accurate and consistent projection of financial data within enterprise-wide scenario analysis. Internal processes for aggregating projections from all relevant systems and regulatory templates should be identified and documented. In addition, the beginning points for projections and scenario variables should align with the end of the historical reference period.

Appendix A: Use of Models and Other Estimation Approaches

Projections of losses and PPNR under various scenarios are key components of enterprise-wide stress testing and capital planning. The firm should ensure that its projection approaches, including any specific processes or methodologies employed, are well supported, transparent, and repeatable over time.

A firm should generally use models or other quantitative methods, supported by expert judgment as appropriate, as the basis for generating projections. In limited instances, such as in cases of new products or businesses, or where insufficient data are available to support modeled approaches, qualitative approaches may be appropriate in lieu of quantitative methods to generate projections for those specific areas.

A firm should adhere to supervisory guidance on model risk management (SR-11-7) when using models, and should have sound internal controls around both quantitative and qualitative approaches.

1. Quantitative Approaches

Firms use a range of quantitative approaches for capital planning. The type and level of sophistication of any quantitative approach should be appropriate for the type and materiality of the portfolio or activity for which it is used and the granularity and length of available data. The firm should also ensure that the quantitative approach selected generates credible estimates

that are consistent with assumed scenario conditions.

A firm should separately estimate losses and PPNR for portfolios or business lines that are either sensitive to different risk drivers or sensitive to risk drivers in a markedly different way, particularly during periods of stress. For instance, losses on commercial and industrial loans and commercial real estate (CRE) loans are, in part, driven by different risk factors, with the path of property values having a pronounced effect on CRE loan losses, but not necessarily on other commercial loans. Similarly, although falling property values affect both income-producing CRE loans and construction loans, the effect often differs materially due to structural differences between the two portfolios. Such differences can become more pronounced during periods of stress.

A firm should have a well-supported variable selection process that is based on economic intuition, in addition to statistical significance where applicable. The firm should provide a clear rationale for the macroeconomic variables or other risk drivers chosen for all quantitative approaches, including why certain variables or risk drivers were not selected.

A firm should estimate losses and PPNR at a sufficiently disaggregated level within a given portfolio or business line to capture observed variations in risk characteristics (for example, credit score or loan-to-value ratio ranges for loan portfolios) and performance across sub-portfolios or segments under changing conditions and environments. Loss and PPNR estimates should also be sufficiently granular to capture changing exposure levels over the planning horizon. However, in assessing the appropriate level of granularity of segments, a firm should factor in issues such as the availability of data or the costs and benefits of model complexity. For example, when projecting losses for a more diverse portfolio with a range of borrower risk characteristics and observed historical performance, firms should segment the portfolio more finely based on key risk attributes unless the segments lack sufficient data observations to produce reliable model estimates.

a. Use of Data

A firm should use internal data to estimate losses and PPNR as part of its enterprise-wide

stress testing and capital planning practices.²⁷ However, it may be appropriate for a firm to use external data if internal data limitations exist as a result of systems limitations, acquisitions, or new products, or other factors that may cause internal data to be less relevant for developing stressed estimates. If a firm uses external data to estimate its losses or PPNR, the firm should ensure that the external data reasonably approximate underlying risk characteristics of the firm's portfolios or business lines. Further, the firm should make adjustments to estimation methods or outputs, as appropriate, to account for identified differences in risk characteristics and performance reflected in internal and external data. In addition, firms should relate their projections under stress scenarios to the characteristics of their assets and activities described in their internal data.

A firm should generally include all available data in its analysis, unless the firm no longer engages in a line of business or its activities have changed such that the firm is no longer exposed to a particular risk. The firm should not selectively exclude data based on the changing nature of the ongoing business or activity without strong empirical support. For example, excluding certain loans only on the basis that they were underwritten to standards that no longer apply or on the basis that the loans were acquired by the firm is not sound practice.

b. Use of Vendor Models²⁸

A firm should have processes to confirm that any vendor or other third-party models it uses are sound, appropriate for the given task, and implemented properly. A firm should clearly outline limitations and uncertainties associated with vendor models.

Vendor model management includes having an appropriate vendor selection process, assigning staff to oversee and maintain the vendor relationships, and ensuring that there is sufficient documentation of vendor models. A firm should also confirm that vendor models have been sufficiently tested and that data used by the vendor are appropriate for use at the firm. The firm should also establish key measures for

27. Firms are required to collect and report a substantial amount of risk information to the Federal Reserve on FR Y-14 schedules. These data may help to support the firms' enterprise-wide stress test. See Capital Assessments and Stress Testing information collection, Reporting Forms FR Y-14A, Q, and M.

28. See SR-13-19/CA 13-21, "Guidance on Managing Outsourcing Risk." (Refer to this manual's section 2124.3)

evaluating vendor model performance and tracking those measures whenever those vendor models are used, as well as assess vendor models (including to incorporate any relevant updates or changes). Vendor models should be subject to validation processes similar to those employed for models developed internally.

2. *Assessing Model Performance*

A firm should use measures to assess model performance that are appropriate for the type of model being used. The firm should outline how each performance measure is evaluated and used. A firm should also assess the sensitivity of material model estimates to key assumptions and use benchmarking to assess reliability of model estimates (see Appendix C, “Use of Benchmark Models in the Capital Planning Process” and Appendix D, “Sensitivity Analysis and Assumptions Management”).

A firm should employ multiple performance measures and tests, as generally no single measure or test is sufficient to assess model performance. This is particularly the case when the models are used to project outcomes in stressful circumstances. For example, assessing model performance through out-of-sample and out-of-time back testing may be challenging due to the short length of observed data series or the paucity of realized stressed outcomes against which to measure the model performance. When using multiple approaches, the firm should have a consistent framework for evaluating the results of different approaches and supporting rationale for why it chose the methods and estimates ultimately used.

A firm should provide supporting information about models to users of the model output, including descriptions of known measurement problems, simplifying assumptions, model limitations, or other ways in which the model exhibits weaknesses in capturing the relationships being modeled. Providing such qualitative information is critical when certain quantitative criteria or tests measuring model performance are lacking.

3. *Qualitative Approaches*

A qualitative approach to project losses and PPNR may be appropriate in limited cases where severe data or other limitations preclude the development of reliable quantitative approaches. The firm should document why such an approach is reliable for generating projections and is justified based on business need.

When using a qualitative approach, the firm should substantiate assumptions and estimates using analysis of current and past risk drivers and performance, internal risk identification, forward-looking risk assessments, external analysis or other available information. The firm should conduct an initial and ongoing assessment of the performance and viability of the qualitative approach. The processes used in qualitative projection approaches should be transparent and repeatable. The firm should also clearly document qualitative approaches and key assumptions used.

Qualitative approaches should be subject to independent review, although the review may differ from the review of quantitative approaches or models. The level of independent review should be commensurate with the

- materiality of the portfolio or business line for which the qualitative approach is used;
- impact of the approach’s output on the overall capital results; and
- complexity of the approach.

Firm staff conducting the independent review of the qualitative approaches should not be involved in developing, implementing or using the approach. However, this staff can be different than the staff that conducts validation of quantitative approaches or models.

Appendix B: Model Overlays

A firm may need to rely on overrides or adjustments to model output (model overlay) to compensate for model, data, or other known limitations.²⁹ If well-supported, use of a model overlay can represent a sound practice.

A model overlay may be appropriate to address cases of identified weaknesses or limitations in the firm’s models that cannot be otherwise addressed, or for select portfolios that have unique risks that are not well captured by the model used for those exposures and activities.³⁰ In contrast, a model overlay that functions as a

29. For the purposes of this appendix, the term “overlays” will be used to cover overrides, overlays, or other adjustments applied to model output. Firms should follow expectations set forth in SR-11-7, “Supervisory Guidance on Model Risk Management,” relating to overlays.

30. Expectations for the use of judgment within model development is discussed in Appendix A, “Use of Models and Other Estimation Approaches.”

general “catch all” buffer on top of targeted capital levels to account for model weaknesses generally would not represent sound practice.³¹

A firm should also avoid extensive reliance on model overlays throughout its capital planning process, particularly for material portfolios or where an overlay would have a large effect on projections. Further, a firm should reduce its reliance on overlays by addressing the underlying model issue over time. Firms should evaluate the reasons for overlays and track and analyze overlay performance.

As part of its overall documentation of methodologies used in stress testing, a firm should document its use of model overlays. Firms must be able to identify the main factors necessitating the use of an overlay as well as how the selected overlay addresses those factors. Key assumptions related to the overlay should be clearly outlined and consistent with assumed scenario conditions.

1. Process for Applying Overlays

A firm should establish a consistent firm-wide process for applying model overlays and for controls around model overlays. The process can vary by model type and portfolio, but should contain some key elements, as described below. This process should be outlined in the firm’s policies and procedures and include a specific exception process for the use of overlays that do not follow the firm’s standards. As part of model development, implementation and use, overlays should be well documented, supported and communicated to senior management. Model overlays should be applied in an appropriate, systematic, and transparent manner. Model results should also be reported to senior management with and without overlay adjustments.

Model overlays (including those based solely on expert or management judgment) should be subject to validation or some other type of effective challenge.³² Consistent with the materiality

31. Firms may choose to apply overall capital buffers as an additional conservative measure, beyond overlays applied at the model level. Overall capital buffers should be subject to the same governance processes applicable to model overlays, as described in section 2 of this appendix. However, supervisors emphasize that having such a buffer should not in any way replace sound model risk management practices for overlays at the individual model level or address the need for the overlay at the individual model level.

32. The term “effective challenge” means critical review by objective, informed parties who have the proper incentives,

principle in SR-11-7, the intensity of model risk management for overlays should be a function of the materiality of the model and overlay. Effective challenge should occur before the model overlay is formally applied, not on an ex-post basis.

Validation or other type of effective challenge of model overlays may differ from quantitative model validation. Staff responsible for effective challenge should *not* also be setting the overlay itself or providing significant input to the level or type of overlay. For example, a committee that develops an overlay should not also be responsible for the effective challenge of the overlay. In addition, staff engaging in the effective challenge of model overlays should meet supervisory expectations relating to incentives, competence, and influence (as outlined in SR-11-7). Staff conducting effective challenge should confirm that model overlays are sufficiently conservative to compensate for model limitations and associated uncertainties in model estimates. Sensitivity analysis should be used to help quantify the overlay.

2. Governance of Overlays

Overlays and adjustments used by a firm should be reviewed and approved at a level within the organization commensurate with the materiality of that overlay or adjustment to overall pro forma results. In general, the purpose and impact of overlays should be communicated to senior management in a manner that facilitates an understanding of the issues by the firm’s senior management. Material overlays to the model—either in isolation or in combination—should receive a heightened level of support and scrutiny, up to and including review by the firm’s board of directors (or a designated committee), in instances where the impact on pro forma results is material.

Senior management should periodically receive a high-level description of the use of model overlays. This description should include the number of models having overlays, whether more material models have overlays, whether overlays on the whole result in more or less conservative projections, and the range of the effect of overlays on the model output (especially for those cases where the overlays produce less conservative outcomes).

Senior management should be able to independently assess the reasonableness of using an

competence, and influence to challenge the model and its results.

overlay to capture a particular risk or compensate for a known limitation. Extensive use of overlays should trigger discussion as to whether new or improved modeling approaches are needed to reduce overlay dependency. Signs that the underlying model needs revision or redevelopment include a high rate of overrides or overrides that consistently affect model performance.

Appendix C: Use of Benchmark Models in the Capital Planning Process

As noted in Appendix A, “Use of Models and Other Estimation Approaches,” a firm should use a variety of methods, including benchmarking, to assess model performance and gain comfort with model estimates. A firm should use benchmark or challenger models to assess the performance of its primary models for all material portfolios or to supplement, where appropriate, the primary models.³³ Such models should be used in conjunction with other aspects of benchmarking, such as comparing model results to actual market data, internal firm data, data from similar firms or portfolios, or judgmental estimates by business line experts. A firm should also use benchmark models during validation as an additional check on the primary model and its results.

Use of benchmark models is particularly important when primary models have exhibited significant deficiencies or are still under development. For instance, a firm’s primary model may use a preferred methodology, but lack a rich data set to support modeled estimates. In these cases, the firm should use benchmark models based on different data and modeling approaches to provide additional checks on primary model estimates. To the extent that a benchmark model highlights that a primary model has flaws (e.g., the model is producing output that is vastly different from experience during prior periods of stress), a firm should analyze whether it would be appropriate to adjust the model specification, apply model overlays, or develop different estimation approaches.

Benchmark models that are developed and run independently of primary models can be used to more effectively calibrate the firm’s final estimates. For example, a firm can use benchmark model outputs to substantiate model overlays, given differences in risk capture between

primary and benchmark models. This type of “triangulation” is especially suitable for those areas of modeling that present considerable uncertainty.

Benchmark models used to arrive at the firm’s final estimates should be subject to model risk management. The intensity and frequency of validation or other type of effective challenge of benchmark models of a firm should correspond to the importance of those models in generating estimates. For example, if the output of a benchmark model is averaged with primary model results to develop final estimates, or if the benchmark model is used to develop overlays or overrides for the primary model, that model should be subject to more intensive validation.

Benchmark models that are used only during the validation process and do not contribute directly to the firm’s estimates do not need to be validated. However, a firm should assess the rigor of all benchmark models and benchmark data used to ensure they provide reasonable comparisons.

Appendix D: Sensitivity Analysis and Assumptions Management

A firm should understand the sensitivity of its stress testing estimates used in capital planning to the various inputs and assumptions. In addition, sensitivity analysis should be used to test the robustness of quantitative approaches and models and enhance reporting to the firm’s senior management, board of directors, and supervisors. A firm should ensure that it identifies, documents, and manages the use of all key assumptions used in capital planning.

1. Sensitivity Analysis

Understanding and documenting a range of potential outcomes provides insight into the inherent uncertainty and imprecision around pro forma results. A firm should assess the sensitivity of its estimates of capital ratios, losses, revenues, and RWAs to key assumptions and uncertainty across the entire firm’s projections under stress. Through this assessment, a firm should calculate a range of potential estimates based on changes to assumptions and inputs. Examples of assumptions that generally should be subject to sensitivity analysis include projected market share, size of the market, cost and flow of deposits, utilization

33. Note that the terms “benchmark model” and “challenger model” are used interchangeably for purposes of this appendix to mean a model to support or give additional perspective to a primary model.

rate of credit lines, discount rates, or level and composition of trading assets and RWA.

A firm should also evaluate the sensitivity of models to key assumptions to evaluate model performance, assess the appropriateness of assumptions, and understand uncertainty associated with model output.

Sensitivity analysis for capital planning models should be applied in a manner consistent with the expectations outlined in the Federal Reserve's supervisory guidance on model risk management (refer to SR-11-7). Sensitivity analysis should be conducted during model development and during model validation to provide information about how models respond to changes in key inputs and assumptions, and how those models perform in stressful conditions. In addition, sensitivity analysis should be applied to understand the range of possible results from vendor-provided models and vendor-provided scenario forecasts that have opaque or proprietary elements. Sensitivity analysis should be used to provide information to help users of model output interpret results, but does not have to result in changes to models or model outputs. Changes made based on sensitivity analysis should be clearly documented and justified.

A firm should ensure that the key sensitivities are presented to senior management and the board in advance of decision-making around the firm's capital plan and capital actions. Sensitivity analysis should also be used to inform senior management, and, as appropriate, the board of directors about the potential uncertainty associated with models employed of the firm's projections under stress.

2. Assumptions Management

A firm should clearly document assumptions when estimating losses, PPNR, and balance sheet, and RWA components. Documentation should include the rationale and empirical support for assumptions and specifically address how those assumptions are consistent with and appropriate under the firm's scenario conditions.

A firm's rationale for assumptions used in capital planning should be consistent with the different effects of scenario conditions, shifts in portfolio mix, and growth or decline in balances projected over the planning horizon. For example, the firm should scrutinize and support any assumptions about sizeable loan growth during a severe economic downturn.

A firm should generally use conservative assumptions, particularly in areas of high uncertainty. The firm should provide greater support for assumptions that appear optimistic or otherwise appear to benefit the firm (such as loss reduction or revenue enhancement). A firm should not assume that senior management will be able to realize favorable strategic actions that cannot be reasonably assured in stress scenarios given the high level of uncertainty around market conditions. Further, a firm should not assume that it would have the perfect foresight that would allow it, for example, to make significant expense reductions in the first quarter of the forecast horizon in anticipation of the forthcoming economic deterioration described in the scenario.

A firm should not always assume that historical patterns will repeat. For example, a firm should not assume that if it has suffered no or minimal losses in a certain business line or product in the past, such a pattern will continue. In addition, a firm should carefully analyze effects of any structural changes in customer base, product, and financial markets on its projections, as these changes could significantly affect a firm's performance under stress scenarios. Furthermore, the firm should explore the potential effects of changes in assumed interrelationships among variables and the behavior of exposures. The firm should also explicitly justify, document, and appropriately challenge any assumptions about diversification benefits.

A firm should confirm that key assumptions used in vendor or other third-party products are transparent and have sufficient support before using the products in stress testing. The firm should limit use of vendor products whose assumptions are not fully transparent or supported or use those products only in conjunction with another approach or compensating controls (e.g., overlays).

Appendix E: Role of the Internal Audit Function in the Capital Planning Process

A firm's internal audit function should play a key role in evaluating the adequacy of the firm's capital planning process and in assessing whether the risk management and internal control practices supporting that process are comprehensive and effective. A firm should establish an audit program around its capital planning process that is consistent with SR-13-1, "Supplemental Policy Statement on the Internal Audit Function and its Outsourcing."

1. *Responsibilities of Audit Function*

The internal audit function should identify all auditable processes related to capital planning and develop an associated audit plan. The audit function should also perform substantive testing to ascertain the effectiveness of the control framework supporting the firm's capital planning process, communicate identified limitations and deficiencies to senior management, and communicate material limitations and deficiencies to the board of directors (or the audit committee of the board). The audit function should comprehensively cover the firm's capital planning process.

The internal audit function should perform periodic reviews of all aspects of the internal control framework supporting the capital planning process to ensure that all individual components as well as the entire process are functioning in accordance with supervisory expectations and the firm's policies and procedures. The internal audit function should also review the manner in which deficiencies are identified, tracked, and remediated. Furthermore, the internal audit function should ensure appropriate independent review is occurring at various levels within the capital planning process.

A firm's internal audit staff should have the appropriate competence and stature to identify and escalate key issues when necessary. Adequate quantitative expertise is needed to assess the effectiveness of the capital planning processes and procedures. The role of audit staff is to evaluate whether the capital planning process is comprehensive, rigorous, and effective. The internal audit function may also rely on an independent third party external to the firm to complete some of the substantive testing as long as the internal audit function can demonstrate proper independence of the third-party from the area being assessed and provide oversight over the execution and quality of the work.

Other supervisory expectations for the internal audit function relating to the capital adequacy process include

- verifying that acceptable policies are in place and that staff comply with those policies;
- assessing accuracy and completeness of the model inventory;
- evaluating procedures for updating processes and ensuring appropriate change/version controls;
- confirming that staff are meeting documentation standards, including reporting;
- reviewing supporting operational systems and evaluating the reliability of data used in the

- capital planning process; and
- reviewing the quality of any work conducted by external parties.

2. *Development of Audit Plan*

The internal audit function should have a documented plan describing its strategy to assess the processes and controls supporting the firm's capital planning process. When defining the annual audit universe and audit plan, the internal audit function of a firm should focus on the most significant risks relating to the capital planning process. The firm may leverage existing or regularly scheduled audits to ensure coverage of all the capital planning process components; however, the findings and conclusions of these audits should be incorporated into the overall summary of audit activities and conclusions regarding the firm's capital planning process.

The internal audit function should also establish a process for reviewing and updating, as appropriate, its audit plan annually to account for material changes to the firm's capital planning process, internal control systems, infrastructure, work processes, business lines, or changes to relevant laws and regulations. The firm should also ensure that the periodic assessment of the capital planning process is supported by a reliable and current assessment of the individual components.

3. *Briefings to Senior Management and Board*

On an annual basis, the internal audit function should report to senior management and the board of directors on the capital planning process to inform recommendations and decisions on the firm's capital plan. The report should provide an opinion of the capital planning process, a statement of the effectiveness of the controls and processes employed, a status update on previously identified issues and remediation plans, and any open issues or uncertainties related to the firm's capital plan. Any key processes that are not comprehensively reviewed and tested, due to timing or significant changes in processes, should be clearly documented and identified as areas with potential heightened risk. In addition, a firm's internal audit function should brief the board of directors (or a designated committee thereof) and

senior management at least quarterly on the status of key findings relating to the capital planning process.

The internal audit function should track responses to its findings and report to the board any cases in which senior management is not implementing required changes related to audit findings or is doing so with insufficient intensity. In addition, the internal audit function should report any identified material deficiencies, limitations, or weaknesses related to the firm's capital planning process to the board of directors and senior management in a timely manner.

Appendix F: Capital Policy

A firm's capital policy should describe how the firm manages, monitors, and makes decisions regarding capital planning.³⁴ The policy should include internal post-stress capital goals and real-time targeted capital levels; guidelines for dividends and stock repurchases; and strategies for addressing potential capital shortfalls.

A firm's capital policy should describe the manner in which consolidated estimates of capital positions are presented to senior management and the board of directors. The capital policy should require staff with responsibility for developing capital estimates to clearly identify and communicate to senior management and board of directors the key assumptions affecting various components that feed into the aggregate estimate of capital positions and ratios. The capital policy should require that aggregated results be directly compared against the firm's stated post-stress capital goals, and that those comparisons are included within the standard reporting to senior management and the board of directors.

1. Post-Stress Capital Goals

Post-stress capital goals should provide specific minimum thresholds for the level and composition of capital that the firm intends to maintain during a stress period. Post-stress capital goals should include any capital measures that are relevant to the firm. The firm should be able to

demonstrate through its own internal analysis, independently of regulatory capital requirements, that remaining at or above its internal post-stress capital goals will allow the firm to continue to operate. Capital goals should take into consideration the uncertainty inherent in capital planning, as well as the economic and market outlook.

The capital policy should describe how senior management and the board concluded that the firm's post-stress capital goals are appropriate, sustainable in different conditions and environments, and consistent with its strategic objectives, business model, and capital plan. In addition, the capital policy should describe the process by which the firm establishes its post-stress capital goals, and include the supporting analysis underpinning the goals chosen by the firm.

A firm should annually review its capital goals, evaluate whether its post-stress capital goals are still appropriate based on changes in operating environment, business mix, or other conditions, and adjust those goals as needed.

A firm should adjust its real-time capital targets (that is the amount of current capital it holds above its post-stress capital goals to ensure it does not fall below those goals under stress) more frequently than it adjusts capital goals, based on changes in the business mix, operating environment, or other current conditions and circumstances.

2. Dividends and Stock Repurchases

A firm's capital policy should describe the processes relating to common stock dividend and repurchase decisions, including the processes to determine the timing, form, and amount of all planned distributions. The capital policy should also specify the analysis and metrics that senior management and the board use to make capital distribution decisions. The analysis should include strategic considerations such as new business initiatives, potential acquisitions, and the other relevant factors.

The capital policy should identify the types of calculations and analysis that support a firm's proposed capital actions and determine the amount of capital available for distribution at any given time. For example, a firm should develop and use payout ratio limits in the decision making process. While payout ratio limits or targets should not be the single determining factor, the capital policy should describe how payout ratio limits or targets are considered, including how they are consistent with firm's strategic goals, how they were derived, and what analysis was

³⁴ A capital policy is a firm's written assessment of the principles and guidelines used for capital planning, issuance, usage, and distributions. 12 C.F.R. 225.8(d)(7).

used to determine the appropriate amount of capital to distribute in a given period. Further, a firm should include in its capital policy threshold levels for payout ratios that trigger management action. Such action should include escalation to the board and potential suspension of capital distributions. Escalation protocols should be clear, credible, and actionable in the event of an actual or projected target is breached.

3. Contingency Plans for Capital Shortfalls

A firm's capital policy should include specific capital contingency actions the firm would take to remedy any current or prospective deficiencies in its capital position. The firm's capital contingency plan should reflect strategies for identifying and addressing potential capital shortfalls and specify circumstances under which the board of directors and senior management will revisit planned capital actions or otherwise institute contingency measures.³⁵ A contingency plan should include a set of thresholds for metrics or events that provide early warning signs of capital deterioration and that trigger management action or scrutiny.³⁶ Additionally, triggers for more severe levels of deterioration should be linked to escalation procedures for more immediate management action and should be consistent with triggers in the firm's recovery plan. Triggers should reflect both point-in-time and forward-looking measures (both baseline and stress).

Capital contingency plans should include options for actions that a firm would consider taking to remedy any current or prospective deficiencies in its capital position, such as reducing or ceasing capital distributions, raising additional capital, reducing risk, or employing other means to preserve existing capital. Contingency options in the firm's capital policy should be consequential, realistic, actionable, and comprehensive.

Capital contingency plans should include a

35. Capital contingency planning should be closely integrated with the broader crisis management framework, including recovery and other contingency planning efforts focused on ensuring sustainability under a broad range of internal or external stresses. See SR-14-1 "Heightened Supervisory Expectations for Recovery and Resolution Preparedness for Certain Large Bank Holding Companies," and SR-14-8, "Consolidated Recovery Planning for Certain Large Domestic Bank Holding Companies."

36. Capital contingency plans may include triggers for liquidity, earnings, debt and credit default swap spreads, ratings downgrades, stock performance, supervisory actions, general market stress, or other noncapital metrics.

detailed explanation of the circumstances in which the firm would consider implementing these options, including when it would reduce or suspend a dividend or repurchase program or not execute a previously planned capital action. The capital contingency plans should specify the type of information that would be provided to decision makers when the firm's current or projected capital levels have deteriorated, including how management would present options to address the capital position and the long-term viability of the firm. Contingency options should be ranked according to ease of execution and impact and should incorporate an assessment of stakeholder reactions. All options should be evaluated for their feasibility and the reasonableness of underlying assumptions (such as whether a firm would be able to raise capital or draw on capital from another entity during a period of stressful market conditions).

Appendix G: Scenario Design

As part of its capital plan, a firm must use at least one scenario that stresses the specific vulnerabilities of the firm's risk profile and operations, including those related to the company's capital adequacy and financial condition.³⁷ The firm's stress scenario should be at least as severe as the Federal Reserve's severely adverse supervisory scenario, measured in terms of its effect on net income and other elements that affect capital.³⁸

As noted in the core document, a firm should develop at least one complete firm-specific scenario that focuses on the specific vulnerabilities of the firm's risk profile and operations. The firm's scenario should be carefully tailored to the idiosyncratic risks of the firm, as defined through the firm's internal material risk identification process, and should incorporate circumstances that are particularly stressful to the firm,

37. 12 C.F.R. 225.8(e)(2). In addition, a firm is required to report to the Federal Reserve its projections under a baseline scenario, which captures the firm's view of the likely operating environment over the planning horizon. A firm may use the Board's baseline scenario for its own baseline scenario if the firm can demonstrate that the Board's baseline scenario is appropriate for the firm's own risks, activities, and outlook; however, a firm cannot use the Board's severely adverse scenario for its own stress scenario.

38. For guidance on the severity of the scenarios, a firm should review the Board's "Policy Statement on the Scenario Design Framework for Stress Testing," which sets forth the Board's approach to designing the severely adverse scenario. See 12 C.F.R. 252, appendix A.

given the firm's idiosyncratic risks and key vulnerabilities. Such circumstances include those affecting the firm's particular business model, revenue drivers, mix of assets and liabilities, geographic footprint, portfolio characteristics, and specific operational risk vulnerabilities. The firm can incorporate the idiosyncratic stress considerations in macroeconomic and financial market variables or a discrete stress event included in the scenario. A firm-specific scenario would not meet supervisory expectations if it is not tailored to the firm's activities and risks. This is the case even if the severity is generally equivalent to the supervisory stress scenarios or if the post-stress capital ratios are lower than those under the supervisory severely adverse scenario.

The stress scenario should include stressful circumstances and events that could, on a stand-alone basis or in combination, reduce the firm's capital levels and ratios and potentially impede the firm's ability to operate as a going concern, and cover material risks to which the firm is exposed over the course of an annual planning cycle. A firm's scenario should include factors that capture economy- or market-wide stresses and idiosyncratic risks that can put a strain on the firm. A firm should also take into account conditions and events that have not previously occurred, but that may pose a significant threat to the firm given its exposures, risk profile, and business strategy.

Use of Multiple Scenarios

In addition, a firm should use multiple scenarios as part of its ongoing capital adequacy assessment to assess a broad range of risks, stressful conditions, or events that could impact the firm's capital adequacy. This assessment should inform development of the internal stress scenario(s) used in the firm's plan, the firm's post-stress capital goals, and its current capital targets. The firm's scenarios should collectively address all material risks to which the firm is exposed over the course of an annual planning cycle.

In designing its stress scenarios, a firm should incorporate risks and vulnerabilities that arise from multiple factors, sources and events. Historical data may provide a starting point for scenarios, but a firm should also consider other data sources and challenge conventional assumptions when identifying the stressful conditions and events that could adversely affect the firm's capital adequacy. In certain instances, scenarios

that include economic and financial market variables that deviate from historical experience and correlations are appropriate if, for example, previously unobserved vulnerabilities exist in certain sectors of the economy or financial markets. In addition, the firm should not exclude experiences that have occurred outside its own history when designing stress scenarios, particularly if the firm has recently expanded its business to include new products, markets, or customers.

The macroeconomic variables used in a given scenario should collectively describe the general operational environment considered in the scenario. A firm should ensure that the scenario includes sufficient macroeconomic variables to support its stress testing estimation methods. While a firm should assess the internal consistency of the scenario, the firm should evaluate whether deviations from historically observed relationships among macroeconomic variables that increase the degree of stress placed on the firm may be appropriate.

Depending on the significance of market risk in a firm's overall risk profile, the firm's stress scenarios should include an adverse movement in financial market variables, such as asset prices, spreads, and rates, and related risk factors that impact a firm's trading exposures. The firm should base market risk factors in the scenario on a thorough evaluation of the specific positions of the firm and the material risks coincident with those positions. A firm should limit use of past periods of financial market stress that do not sufficiently stress the firm's current positions.

Appendix H: Risk-weighted Asset (RWA) Projections

A firm should maintain a sound process for projecting RWAs over the planning horizon. The firm's initial RWA calculations should be consistent with applicable regulatory capital requirements. In addition, the firm's projections of RWAs should be developed in a fashion consistent with the scenario conditions and in accordance with applicable regulatory capital requirements.

1. Initial RWA Calculations

Starting balances for both on- and off-balance sheet exposures and applicable risk weights form the foundation for estimates of post-stress capital ratios. Therefore, firms should verify carefully the accuracy of these starting balances.

Moreover, deficiencies in starting RWA calculations are generally compounded in RWA projections over the planning horizon. A firm should ensure that it has sound controls around its RWA calculation and regulatory reporting processes as part of the firm's broader data governance program.

2. RWA Projections

A firm should ensure that RWA projections are consistent with a given scenario and incorporate the impact of projected changes in exposure amounts and risk characteristics of on- and off-balance sheet exposures under the scenario. A firm should demonstrate that assumptions associated with RWA projections are clearly conditioned on a given scenario and are consistent with stated internal and external business strategies. In addition, firms should ensure that projected market risk-weighted assets (market RWAs) are consistent with market factors (e.g., volatility levels, equity index levels, bond spreads) and assumptions around the size and composition of their trading assets.

A firm should document assumptions for projecting RWAs and their relationship to the RWA projections. If the firm's models for projecting RWAs rely upon historical relationships, the firm should provide a description of the historical data used and clearly describe why these relationships are expected to be maintained under a given scenario. Further, a firm should analyze the appropriateness of assumptions regarding the following:

- any aggregation of balance projections by exposure type or characteristic (e.g., balances for exposures that do not distinguish between amounts that are considered past due and those that are current) for purposes of applying corresponding risk weights;
- any use of average or effective risk weights based on the firm's as-of date portfolio composition or historical trend; and
- any exposure types for which RWAs are held constant over the projection horizon.

For purposes of projecting RWAs under the standardized approach, a firm should project balances, risk characteristics, and calculation parameters with appropriate consistency and granularity to facilitate application of appropriate regulatory risk weights for its on- and off-balance sheet exposures.³⁹ In particular, RWA

projections should include information sufficient to assess the impact of potential changes to the following:

- counterparty mix, collateral mix, collateral haircuts, and netting assumptions for derivatives and repo-style transactions;
- default fund assumptions for derivatives that are centrally cleared;
- simplified supervisory formula approach (SSFA) input parameters for securitization exposures;
- organization for Economic Cooperation and Development (OECD) Country Risk Classifications (CRCs) or default status relating to foreign exposures;
- the utilization rate of off-balance sheet lines of credit;
- the mix between unconditionally cancellable and conditionally cancellable off balance sheet exposures;
- the volume of residential mortgage exposures that qualify for 50 percent risk weight, and;
- the volume of past due exposures as defined under Regulation Q.⁴⁰

3. Market Risk-weighted Asset Projections

The methods and processes used to project market RWAs will differ across firms, in part as a function of the combination of model and non-model based methods used to determine starting market RWAs. However, as a general matter, market RWAs are expected to be positively correlated to volatility, spreads, or other relevant market factors, holding all things equal. If a firm projects flat or declining market RWAs over the planning horizon under the stress scenarios, the firm should provide support for the reasonableness of these assumptions under stressful market conditions. In addition, the firm should demonstrate that those assumptions are applied consistently across the enterprise-wide stress testing process, including for revenue projections.

If a firm that is not currently subject to the market risk rule projects its trading assets and trading liabilities to grow over the planning horizon, it should assess whether the projected growth would require the firm to calculate market RWA under the regulatory capital rule.⁴¹

40. 12 C.F.R. 217.32(k).

41. 12 C.F.R. 217.201.

39. 12 C.F.R. 217, subpart D.

The firm should estimate the effect of market RWAs, if applicable, on its projected capital ratios and document the process used to project market RWAs in its capital plan.

4. Independent Review of RWA Reporting and Projections

A firm should implement and document an independent review of RWA regulatory reporting by the firm's internal audit function or another independent control function. The independent review should ensure point-in-time RWA calculation processes appropriately capture all relevant on- and off-balance sheet exposures and are consistent with applicable risk-weighting methodologies to which the firm is subject under Regulation Q. The independent review should be conducted by a party with the necessary expertise to perform such reviews but with independence from the assignment of the risk weights for regulatory reporting purposes. The review should provide reasonable assurance that the initial RWAs are accurate and that the methods used to project RWAs are sound. Documentation of the independent review should clearly describe the scope of the review, outcomes and findings of the review, and any associated remediation efforts. A firm should also ensure that the underlying data processes supporting RWA projections include appropriate controls, reconciliations and attestations, and that data integrity testing is conducted by an independent party.

Appendix I: Operational Loss Projections

A firm faces a wide range of operational risk in conducting its business operations. Operational losses can arise from various sources, including inadequate or failed internal processes, people, and systems, or from external events, and can differ in frequency and severity. For example, some operational loss events, such as credit card fraud, are often more predictable as they occur at high frequency, but generally have low loss severity. The outcome of other events, such as major litigation, are less certain and can result in outsized losses.

1. Risk Identification Process

A firm should maintain a sound process for

estimating operational risk losses in its capital planning process, taking into account the differences in loss characteristics of different operational loss event types. A firm's risk identification process should include the evaluation of the type of operational risk loss events to which the firm is exposed and the sensitivity of those events to internal and external operating environments.

The firm-specific scenario submitted in a firm's capital plan should capture the firm's material operational risks, be designed with the firm's particular vulnerabilities in mind, and include potential firm-specific events such as system failures, or litigation-related losses. The firm should evaluate both the firm's own loss history and the large loss events experienced by industry peers with similar business mix and overall operational risk profiles.

2. Approaches to Operational Loss Estimation

The firm should have transparent and well-supported estimation approaches based on both quantitative analysis and expert judgment, and should not rely on unstable or unintuitive correlations to project operational losses. Scenario analysis should be a core component of the firm's operational loss projection approaches.

Certain operational risks, particularly those most likely to give rise to large losses, often may not have measureable relationships to the overall scenario conditions. In addition, large operational loss events are often idiosyncratic, limiting the relevance of historical data. The firm should also limit dependence on distribution-based approaches that rely on historical data and require significant assumptions when projecting large operational losses. The firm should evaluate a range of outcomes under various scenarios, and make generally conservative assumptions.

The firm should engage business line and senior management to identify operational risk vulnerabilities and assess ways an operational risk event may unfold. The estimation approaches should also be subject to an effective independent review and challenge process.

3. Use of Data

The firm's operational loss projection approaches should make appropriate use of relevant reference data, including both internal and external data, evaluate all measurable linkages to overall scenario conditions, and include all

potential sources of material operational risk losses across the firm. A firm's internal loss data should serve as both inputs to the firm's operational loss estimation approaches projections and a benchmark for operational loss estimates in various scenarios. A firm should have sound and comprehensive internal data-collection processes that capture key operational elements.

The firm should include all relevant operational loss data, including large operational loss events such as legal settlements and tax and compliance penalties. If a firm's internal data lack sufficient operational loss history or granularity, the firm should use relevant external data to supplement its internal data.

Federal Reserve Supervisory Assessment of Capital Planning and Positions for Large and Noncomplex Firms Section 4065.0

The Federal Reserve is issuing this guidance to explain its supervisory expectations for capital planning at large and noncomplex bank holding companies and intermediate holding companies of foreign banking organizations, consistent with the broad supervisory expectations set forth in SR-12-17/CA-12-14, “Consolidated Supervision Framework for Large Financial Institutions.”¹ Capital is central to a firm’s ability to absorb unexpected losses and continue to lend to credit-worthy businesses and consumers. Therefore, a firm’s processes for managing and allocating its capital resources are critical to its financial strength and resiliency, and also to the stability and effective functioning of the U.S. financial system. The following guidance provides the Federal Reserve’s core capital planning expectations for large and noncomplex firms, building upon the capital planning requirements in the Federal Reserve’s capital plan rule and stress test rules.^{2,3}

The guidance outlines capital planning expectations for

- Governance
- Risk management
- Internal controls
- Capital policy
- Scenario design, and
- Projection methodologies.

Further, the guidance includes several appendices that detail supervisory expectations on a firm’s capital planning process. This guidance largely consolidates the Federal Reserve’s existing capital planning guidance, including:

- Capital Planning at Large Bank Holding Companies: Supervisory Expectations and Range

1. The term “capital planning process,” as used herein, which aligns with terminology in SR-12-17/ CA-12-14, is equivalent to the term “capital adequacy process” used in other Federal Reserve documents.

2. For the capital plan rule, refer to section 225.8 of Regulation Y (12 C.F.R. 225.8). Regulation Q (12 C.F.R. 217) establishes minimum capital requirements and overall capital adequacy standards for Federal Reserve-regulated institutions. Regulation YY (12 C.F.R. 252) establishes capital stress testing requirements for bank holding companies with total consolidated assets of \$50 billion or more, including requirements to participate in the Federal Reserve’s annual supervisory stress test and conduct their own internal capital stress tests.

3. With the issuance of this letter, SR-99-18, “Assessing Capital Adequacy in Relation to Risk at Large Banking Organizations and Others with Complex Risk Profiles,” is superseded. In addition, SR-09-4, “Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies,” is superseded with respect to firms subject to this guidance.

- of Current Practice (August 2013)⁴
- Comprehensive Capital Analysis and Review 2015 Summary Instructions and Guidance (October 2014)⁵
- Instructions for the Capital Assessments and Stress Testing information collection (Reporting Form FR Y-14A), (OMB No. 7100-0341)⁶
- SR-11-7, “Supervisory Guidance on Model Risk Management” (Refer to section 2126.0 of this manual.)
- SR-12-7, “Supervisory Guidance on Stress Testing for Banking Organizations with More Than \$10 Billion in Total Consolidated Assets”
- SR-12-17/CA-12-14, “Consolidated Supervision Framework for Large Financial Institutions” (Refer to section 2124.05 of this manual.) (Refer to SR-15-19 and its attachment.)

4065.0.1 FEDERAL RESERVE GUIDANCE ON SUPERVISORY ASSESSMENT OF CAPITAL PLANNING AND POSITIONS FOR LARGE AND NONCOMPLEX FIRMS (OMB NO. 7100-0341 AND OMB NO. 7100-0342)

I. Introduction

This guidance (the attachment to SR-15-19) provides the Federal Reserve’s core capital planning expectations for Large and Noncomplex Firms, building upon the capital planning requirements included in the Board’s capital plan rule and stress test rules. This guidance outlines capital planning expectations⁷ for these firms in the following areas:

4. Available at www.federalreserve.gov/bankinforeg/bcreg20130819a1.pdf.

5. Available at www.federalreserve.gov/newsevents/press/bcreg/bcreg20141017a1.pdf.

6. Available at www.federalreserve.gov/apps/reportforms/reportdetail.aspx?sOoYJ+5BzDa2AwLR/gLe5DPHqFttuq/4.

7. Note that these expectations build upon the capital planning requirements set forth in the Board’s capital plan rule and stress test rules (12 C.F.R. 225.8; 12 C.F.R. 252, subparts E and F). Other relevant rules pertaining to the Board’s regulatory regime for capital planning and positions are described above in Section II, “Regulatory Requirements for Capital Positions and Planning.” The Federal Reserve may not conduct or sponsor, and an organization (or a person) is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for this guidance are OMB No. 7100-0341 and OMB No. 7100-0342.

- Governance
- Risk management
- Internal controls
- Capital policy
- Incorporating stressful conditions and events, and
- Estimating impact on capital positions.

Further, this guidance provides detailed supervisory expectations on a firm's capital planning process in the following appendices:

- A. Use of Models and Other Estimation Approaches
- B. Model Overlays
- C. Use of Benchmark Models in the Capital Planning Process
- D. Sensitivity Analysis and Assumptions Management
- E. Role of the Internal Audit Function in the Capital Planning Process
- F. Capital Policy
- G. Scenario Design
- H. Risk-weighted Asset (RWA) Projections
- I. Operational Loss Projections

This guidance applies to U.S. bank holding companies and intermediate holding companies of foreign banking organizations that have total consolidated assets of at least \$50 billion but less than \$250 billion, have consolidated total on-balance sheet foreign exposure of less than \$10 billion, and are not otherwise subject to the Federal Reserve's Large Institution Supervision Coordinating Committee (LISCC) framework⁸ (referred to in this guidance as a "Large and Noncomplex Firm").^{9,10} The guidance is effective immediately for bank holding companies that are subject to the capital plan rule as of January 1, 2016. The guidance will become effective for intermediate holding companies beginning on January 1, 2017, which is the date on which the capital plan rule applies to these firms.

The Federal Reserve has different expectations for sound capital planning and capital adequacy depending on the size, scope of operations, activities, and systemic importance of a firm. Concurrently with issuance of this guidance, the Federal Reserve is issuing separate guidance for U.S. bank holding companies and intermediate holding companies that are subject to the LISCC framework (referred to as a "LISCC Firm") or that otherwise have total consolidated assets of \$250 billion or more or consolidated total on-balance sheet foreign exposure of \$10 billion or more (referred to as a "Large and Complex Firm"). This separate guidance clarifies that expectations for LISCC Firms and Large and Complex Firms are higher than the expectations for Large and Noncomplex Firms.

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II. Regulatory Requirements for Capital Positions and Planning

Sound capital planning for any firm begins with adherence to all applicable rules and regulations relating to capital adequacy. Three Federal Reserve regulations form the basis of the regulatory framework for capital positions and capital planning:

- (1) Regulation Q (12 C.F.R. 217), Capital Adequacy Requirements for Board-regulated Institutions;
- (2) Regulation YY (12 C.F.R. 252), Enhanced Prudential Standards; and
- (3) Section 225.8 of Regulation Y (12 C.F.R. 225.8, also known as the capital plan rule).

Regulation Q establishes minimum capital requirements and overall capital adequacy standards for Federal Reserve-regulated institutions. Among other things, Regulation YY establishes capital stress testing requirements for bank holding companies with total consolidated assets of \$50 billion or more, including requirements to participate in the Federal Reserve's annual supervisory stress test and conduct their own internal

with the Federal Financial Institutions Examination Council (FFIEC) 009 Country Exposure Report.

10. This guidance does not apply to nonbank financial companies designated by the Financial Stability Oversight Council for supervision by the Board of Governors.

8. The LISCC framework is designed to materially increase the financial and operational resiliency of systemically important financial institutions to reduce the probability of, and cost associated with, their material financial distress or failure. See www.federalreserve.gov/bankinforeg/large-institution-supervision.htm.

9. Total consolidated assets equals the amount of total assets reported on the firm's Consolidated Financial Statements for Holding Companies (FR Y-9C), measured as an average over the preceding four quarters. If a firm has not filed the FR Y-9C for each of the four most recent consecutive quarters, a firm's total consolidated assets are measured as the average of its total consolidated assets, as reported on the FR Y-9C, for the most recent quarter or consecutive quarters, as applicable. Consolidated total on-balance sheet foreign exposure equals total cross-border claims less claims with head office or guarantor located in another country plus redistributed guaranteed amounts to the country of head office or guarantor plus local country claims on local residents plus revaluation gains on foreign exchange and derivative products, calculated as of the most recent year-end in accordance

capital stress tests. The capital plan rule establishes general capital planning requirements for a bank holding company with total consolidated assets of \$50 billion or more and requires a bank holding company to develop an annual capital plan that is approved by its board of directors.

This guidance provides the Federal Reserve's core capital planning expectations for firms subject to this guidance, building upon the capital planning requirements in the Federal Reserve's capital plan rule and stress test rules.¹¹

III. Capital Planning Expectations

Capital is central to a firm's ability to absorb unexpected losses and continue to lend to credit-worthy businesses and consumers. A firm's capital planning processes are critical to its financial strength and resiliency.

SR-12-17/CA-12-14, "Consolidated Supervision Framework for Large Financial Institutions," outlines core expectations for sound capital planning for bank holding companies with total consolidated assets of \$50 billion or more. This capital planning and positions guidance provides additional details around the Federal Reserve's core capital planning expectations for Large and Noncomplex Firms, building on the capital planning requirements included in the capital plan rule and the Board's stress test rules.¹² A firm should maintain a sound capital planning process on an ongoing basis, including in between submissions of its annual capital plan.¹³

A. Governance

The Federal Reserve expects a firm to have sound governance over its capital planning process. In general, senior management should establish the capital planning process and the board of directors should review and periodically approve that process.

1. Board of Directors

A firm's board of directors is ultimately responsible and accountable for the firm's capital-related decisions and for capital planning. The firm's capital planning should be consistent with the strategy and risk appetite set by the board and with the firm's risk levels, including how risks at the firm may emerge and evolve under stress. The board must annually review and approve the firm's capital plan.¹⁴

The board should direct senior management to provide a briefing on their assessment of the firm's capital adequacy at least quarterly, and whenever economic, financial, or firm-specific conditions warrant a more frequent update. The briefing should describe whether current capital levels and planned capital distributions remain appropriate and consistent with capital goals (see Section III.D, "Capital Policy"). In their briefing, senior management should also highlight for the board any problem areas related to capital planning identified by senior management, internal audit, or supervisors.

The board should hold senior management accountable for providing sufficient information on the firm's material risks and exposures to inform board decisions on capital adequacy and actions, including capital distributions. Information provided to the board should be clear, accurate, and timely. The board should direct senior management to provide this information at least quarterly and whenever economic, financial, or firm-specific conditions warrant a more frequent update. The information presented to the board should include consideration of a number of factors, such as

- macro-economic conditions and relevant market events;
- current capital levels relative to budgets and forecasts;
- post-stress capital goals and targeted real time capital levels (see section III.D, "Capital Policy");
- enterprise-wide and line-of-business performance;
- expectations from stakeholders (including shareholders, regulators, investors, lenders, counterparties, and rating agencies);
- potential sources of stress to the firm's operating performance; and

11. Refer to footnote 3.

12. The capital planning process described in this guidance is broadly equivalent to an internal capital adequacy assessment process (ICAAP) under the Federal Reserve's advanced approaches capital guidelines. The expectations articulated in this document are consistent with the U.S. federal banking agencies' supervisory guidance relating to the ICAAP (see 73 FR 44620 (July 31, 2008)).

13. The term "capital planning process" used in this document, which aligns with terminology in SR-12-17/CA-12-14, is equivalent to the term "capital adequacy process" used in other Federal Reserve documents.

14. 12 C.F.R. 225.8(e)(1)(iii).

- risks that may emerge only under stressful conditions.

After receiving the information, the board should be in a position to understand the major drivers of the firm's projections under a range of conditions, including baseline and stress scenarios.

The board should direct senior management to provide information about the firm's estimation approaches, model overlays, and assessments of model performance (see Appendix A, "Use of Models and Other Estimation Approaches" and Appendix B, "Model Overlays"). The board should also receive information about uncertainties around projections of capital needs or limitations within the firm's capital planning process to understand the impact of these weaknesses on the process. This information should include key assumptions and the analysis of sensitivity of a firm's projections to changes in the assumptions (see Appendix D, "Sensitivity Analysis and Assumptions Management"). The board should incorporate uncertainties in projections and limitations in the firm's capital planning process into its decisions on capital adequacy and capital actions. It should also review and approve mitigating steps to address capital planning process weaknesses.

The board should direct senior management to establish sound controls for the entire capital planning process. The board should approve policies related to capital planning, and review them annually. The board should also approve capital planning activities and strategies. The board of directors should maintain an accurate record of its meetings pertaining to the firm's capital planning process.

2. Senior Management

Senior management should direct staff to implement board-approved capital policies, capital planning activities, and strategies in an effective manner. Senior management should make informed recommendations to the board regarding the firm's capital planning and capital adequacy, including post-stress capital goals and capital distribution decisions. Senior management's proposed capital goals and capital distributions should have analytical support and take into account the expectations of important stakeholders, including shareholders, rating agencies, counterparties, depositors, creditors, and supervisors.

Senior management should design and oversee the implementation of the firm's capital planning process; identify and assess material risks and use appropriate firm-specific scenarios in the firm's stress test; monitor and assess capital planning practices to identify limitations and uncertainties and develop remediation plans; understand key assumptions used throughout a firm's capital planning process and assess the sensitivity of the firm's projections to those assumptions (see Appendix D, "Sensitivity Analysis and Assumptions Management"); and review the capital planning process at least semi-annually.

Senior management should establish a process for independent review of the firm's capital planning process, including the elements outlined in this guidance. The independent review process should be designed to identify the weaknesses and limitations of the capital planning process and the potential impact of those weaknesses on the process. Senior management should also develop remediation plans for any identified weaknesses affecting the reliability of capital planning results. Both the specific identified weaknesses and the remediation plans should be reported to the board of directors in a timely manner.

B. Risk Management

A firm should have a risk management infrastructure that appropriately identifies, measures, and assesses material risks and provides a strong foundation for capital planning.¹⁵ This risk management infrastructure should be supported by comprehensive policies and procedures, clear and well-established roles and responsibilities, and strong and independent internal controls. In addition, the risk management infrastructure should be built upon sound information technology and management information systems. The Federal Reserve's supervisory assessment of the sufficiency of a firm's capital planning process will depend in large part on the effectiveness of the firm's risk management infrastructure and the strength of its process to identify unique risks under normal and stressful conditions, as well as on the strength of its overall governance and internal control processes.

1. Risk Identification and Assessment Process

A firm's risk identification process should include a comprehensive assessment of risks stemming from its unique business activities and associated exposures. The assessment should include on-balance sheet assets and liabilities, off-balance sheet exposures, vulnerability of the firm's earnings, and other major firm-specific determinants of capital adequacy under normal and stressed conditions. This assessment should also capture those risks that only materialize or become apparent under stressful conditions.

The specifics of the risk identification process will differ across firms given differences in organizational structure, business activities, and size and complexity of operations. However, the risk identification process at all firms subject to this guidance should be dynamic, inclusive, and comprehensive, and drive the firm's capital adequacy analysis. A firm should

- evaluate material risks across the enterprise to ensure comprehensive risk capture on an ongoing basis;
- actively monitor its material risks; and
- use identified material risks to inform key aspects of the firm's capital planning, including the development of stress scenarios, the assessment of the adequacy of post-stress capital levels, and the appropriateness of potential capital actions in light of the firm's capital objectives.

A firm should be able to demonstrate how material risks are accounted for in its capital planning process. For risks not well captured by scenario analysis, the firm should clearly articulate how the risks are otherwise captured and addressed in the capital planning process and factored into decisions about capital needs and distributions.

2. Risk Measurement and Risk Materiality

A firm should have a sound risk measurement process that informs senior management about the size and risk characteristics of exposures and business activities under both normal and stressful operating conditions. A firm should employ risk measurement approaches that are appropriate for its size, complexity and risk profile.

Identified weaknesses, limitations, biases, and assumptions in the firm's risk measurement pro-

cesses should be assessed for their potential impact on the integrity of a firm's capital planning process (see Appendix D, "Sensitivity Analysis and Assumptions Management"). A firm should have a process in place for determining materiality in the context of material risk identification and capital planning. This process should include a sound analysis of relevant quantitative and qualitative considerations, including, but not limited to, the firm's risk profile, size, and complexity, and their effects on the firm's projected regulatory capital ratios in stressed scenarios.¹⁶

A firm should identify how and where its material risks are accounted for within the capital planning process. The firm should be able to specify material risks that are captured in its scenario design, the approaches used to estimate the impact on capital, and the risk drivers associated with each material risk.

C. Internal Controls

A firm should have a sound internal control framework that helps ensure that all aspects of the capital planning process are functioning as designed and result in sound assessments of the firm's capital needs. The framework should include

- an independent internal audit function;
- independent review and validation practices; and
- integrated management information systems, effective reporting, and change control processes.

A firm's internal control framework should support its entire capital planning process, including the sufficiency of and adherence to policies and procedures; risk identification, measurement, and management practices and systems used to produce input data; and the models, management overlays, and other methods used to generate inputs to post-stress capital estimates. Any part of the capital planning process that relies on manual procedures should receive heightened attention. The internal control framework should also assess the aggregation and reporting process used to produce reports to

16. For simplicity, the terms "quantitative" and "qualitative" are used to describe two different types of approaches, with the recognition that all quantitative estimation approaches involve some qualitative/judgmental aspects, and qualitative estimation approaches produce quantitative output.

senior management and to the board of directors and the process used to support capital adequacy recommendations to the board.

1. Comprehensive Policies, Procedures, and Documentation for Capital Planning

A firm should have policies and procedures that support consistent and repeatable capital planning processes.¹⁷ Policies and procedures should describe the capital planning process in a manner that informs internal and external stakeholders of the firm's expectations for internal practices, documentation, and business line controls. The firm's documentation should be sufficient to provide relevant information to those making decisions about capital actions. The documentation should also allow parties unfamiliar with a process or model to understand generally how it operates, as well as its main limitations, key assumptions, and uncertainties.

Policies and procedures should also clearly identify roles and responsibilities of staff involved in capital planning and provide accountability for those responsible for the capital planning process. A firm should also have an established process for policy exceptions. Such exceptions should be approved by the appropriate level of management based upon the gravity of the exception. Policies and procedures should reflect the firm's current practices, and be reviewed and updated as appropriate, but at least annually.

2. Model Validation and Independent Review of Estimation Approaches

Models used in the capital planning process should be reviewed for suitability for their intended uses. A firm should give particular consideration to the validity of models used for calculating post-stress capital positions. In particular, models designed for ongoing business activities may be inappropriate for estimating losses, revenue, and expenses under stressed conditions. If a firm identifies weaknesses or uncertainties in a material model, the firm should make adjustments to model output if the find-

ings would otherwise result in the material understatement of capital needs (see Appendix B, "Model Overlays"). If the deficiencies are critical, the firm should restrict the use of the model, apply overlays, or avoid using the model entirely.

A firm should independently validate or otherwise conduct effective challenge of models used in internal capital planning, consistent with supervisory guidance on model risk management, with priority given to more material models.¹⁸ The model review and validation process should include an evaluation of conceptual soundness of models and ongoing monitoring of the model performance. The firm's validation staff should have the necessary technical competencies, sufficient stature within the organization, and appropriate independence from model developers and business areas to provide a critical and unbiased evaluation of the estimation approaches.

A firm should maintain an inventory of all estimation approaches used in the capital planning process, including models used to produce projections or estimates used by the models that generate final loss, revenue, expense, and capital projections.¹⁹ Material models should receive greater attention.²⁰ The intensity and frequency of validation work should be a function of the importance of those models in generating estimates of post-stress capital.

Not all models can be fully validated prior to use in capital planning. However, a firm should make efforts to conduct a conceptual soundness review of its material models prior to their use in capital planning. If such a conceptual soundness review is not possible, the absence of that review should be made transparent to users of model output and the firm should determine whether the use of compensating controls (such as conservative adjustments) are warranted.

Further, a firm should treat output from material models for which there are model risk management shortcomings with caution.

18. See SR-11-7, "Supervisory Guidance on Model Risk Management" (SR-11-7.) The term "effective challenge" means critical review by objective, informed parties who have the proper incentives, competence, and influence to challenge the model and its results.

19. The definition of a model covers quantitative approaches whose inputs are partially or wholly qualitative or based on expert judgment, provided that the output is quantitative in nature.

20. Materiality of the model is a function of both the importance of the business or portfolio assessed and the impact of the model on the firm's overall results.

17. See Instructions for the Capital Planning and Stress Testing Information Collection (Reporting Form FR Y-14A), Appendix A (Supporting Documentation), available at www.federalreserve.gov/apps/reportforms/reportdetail.aspx?sOoYJ+5BzDa2AwLR/gLe5DPHQFttuq/4.

3. Management Information Systems and Change Control Processes

A firm should have internal controls that ensure the integrity of reported results and that make certain the firm is identifying, documenting, reviewing, and tracking all material changes to the capital planning process and its components. The firm should ensure that such controls exist at all levels of the capital planning process. Specific controls should ensure

- sufficiently sound management information systems to support the firm's capital planning process;
- comprehensive reconciliation and data integrity processes for key reports;
- the accurate and complete presentation of capital planning process results, including a description of adjustments made to compensate for identified weaknesses; and
- that information provided to senior management and the board is accurate and timely.

Many of the processes used to assess capital adequacy, including models, data, and management information systems, are tightly integrated and interdependent. As a result, a firm should ensure consistent change control oversight across the entire firm, in line with existing supervisory guidance.²¹ A firm should establish and maintain a policy describing minimum internal control standards for managing change in capital planning process policies and procedures, model development, information technology, and data. Control standards for these areas should address risk, testing, authorization and approval, timing of implementation, and post-installation verification.

4. Internal Audit Function

Internal audit should play a key role in evaluating capital planning and the elements described in this guidance to ensure that the entire process is functioning in accordance with supervisory expectations and the firm's policies and procedures. Internal audit should review the manner in which deficiencies are identified, tracked, and remediated. Furthermore, internal audit should ensure appropriate independent review and challenge is occurring at all key levels within the capital planning process.

21. Federal Financial Institutions Examination Council, "IT Examination Handbook—Operations Booklet," available at http://it handbook.ffiec.gov/ITBooklets/FFIEC_ITBooklet_Operations.pdf. See also SR-15-3, "FFIEC Information Technology Examination Handbook."

As discussed further in Appendix E, "Role of the Internal Audit Function in the Capital Planning Process," internal audit staff should have the appropriate competence and influence to identify and escalate key issues. All deficiencies, limitations, weaknesses and uncertainties identified by the internal audit function that relate to the firm's capital planning process should be reported to senior management, and material deficiencies should be reported to the board of directors (or the audit committee of the board) in a timely manner.²²

D. Capital Policy

A capital policy is a firm's written assessment of the principles and guidelines used for capital planning, issuance, usage, and distributions.²³ This includes internal post-stress capital goals (as discussed in more detail below and in Appendix F, "Estimating Impact on Capital Positions") and real-time targeted capital levels; guidelines for dividend payments and stock repurchases; strategies for addressing potential capital shortfalls; and internal governance responsibilities and procedures for the capital policy. The capital policy must be approved by the firm's board of directors or a designated committee of the board.²⁴

The capital policy should be reevaluated at least annually and revised as necessary to address changes to the firm's business strategy, risk appetite, organizational structure, governance structure, post-stress capital goals, real-time targeted capital levels, regulatory environment, and other factors potentially affecting the firm's capital adequacy.

A capital policy should describe the firm's capital adequacy decision-making process, including the decision-making process for common stock dividend payments or stock repurchases.²⁵ The policy should incorporate action-

22. For additional information on supervisory expectations for internal audit see SR-13-1, "Supplemental Policy Statement on the Internal Audit Function and Its Outsourcing."

23. 12 C.F.R. 225.8(d)(7).

24. 12 C.F.R. 225.8(e)(1)(iii).

25. Consistent with the Board's November 14, 1985, Policy Statement on the Payment of Cash Dividends, the principles of which are incorporated into this guidance, firms should have comprehensive policies on dividend payments that clearly articulate the firm's objectives and approaches for maintaining a strong capital position and achieving the objectives of the policy statement. See *Bank Holding Company Supervision Manual*, section 2020.5.1.1, *Intercompany Trans-*

able protocols, including governance and escalation, in the event a post-stress capital goal, real-time targeted capital level, or other early warning metric is breached.

Post-Stress Capital Goals

A firm should establish post-stress capital goals that are aligned with its risk appetite and risk profile, its ability to act as a financial intermediary in times of stress, and the expectations of internal and external stakeholders. Post-stress capital goals should be calibrated based on the firm's own internal analysis, independent of regulatory capital requirements, of the minimum level of post-stress capital the firm has deemed necessary to remain a going concern over the planning horizon. A firm should also determine targets for real-time capital ratios and capital levels that ensure that capital ratios and levels would not fall below the firm's internal post-stress capital goals (including regulatory minimums) under stressful conditions at any point over the planning horizon. For more details, see Appendix F, "Capital Policy."

E. Incorporating Stressful Conditions and Events

As part of its capital planning process, a firm should incorporate appropriately stressful conditions and events that could adversely affect the firm's capital adequacy into its capital planning. As part of its capital plan, a firm must use at least one scenario that stresses the specific vulnerabilities of the firm's activities and associated risks, including those related to the company's capital adequacy and financial condition.²⁶

1. Scenario design

A firm should either develop a complete internal scenario or adjust the Federal Reserve's supervisory scenarios for the specific vulnerabilities of the firm's risk profile and operations, as needed, to appropriately capture the firm's risks (see Appendix G, "Scenario Design").

actions (Dividends), available at www.federalreserve.gov/boarddocs/supmanual/bhc/bhc.pdf.

26. 12 C.F.R. 225.8(e)(2).

2. Scenario narrative

A firm's stress scenario should be supported by a brief narrative describing how the scenario addresses the firm's particular material risks and vulnerabilities, and how the paths of the scenario variables relate to each other.

F. Estimating Impact on Capital Positions

A firm should employ estimation approaches that allow it to project the impact on capital positions of various types of stressful conditions and events. The firm's stress testing practices should capture the potential increase in losses or decrease in pre-provision net revenue (PPNR) that could result from the firm's risks, exposures, and activities under stressful scenarios. A firm should estimate losses, revenues, expenses, and capital using a sound method that relates macroeconomic and other risk drivers to its estimates. The firm should be able to identify the manner in which key variables, factors, and events in a scenario affect losses, revenue, expenses, and capital over the planning horizon. The firm may use simple approaches for their non-material portfolios or business lines, such as application of loss or revenue rates during the prior stress periods or other conservative assumptions.

1. Loss estimation

A firm should provide support for the assumed relationship between risk drivers and losses. A firm is expected to estimate losses by type of business activity.

a. Credit risk losses on loans and securities

A firm should develop sound methods to estimate credit losses under stress that take into account the type and size of portfolios, risk characteristics, and data availability. A firm should understand the key characteristics of its loss estimation approach. In addition, a firm's reserves for each quarter of the planning horizon, including the last quarter, should be sufficient to cover estimated loan losses consistent with generally accepted accounting standards.

A firm should test credit-sensitive securities for potential other-than-temporary impairment (OTTI) regardless of current impairment status. The threshold for determining OTTI for structured products should be based on cash-flow

analysis and credit analysis of underlying obligors.

b. Operational-risk losses

A firm should maintain a sound process for estimating operational risk losses in its capital planning process. Operational losses can rise from various sources, including inadequate or failed internal processes, people, and systems, or from external events (see Appendix I, “Operational Loss Projections”).

2. PPNR

In projecting PPNR, a firm should take into account not only its current positions, but also how its activities, business strategy, and revenue drivers may evolve over time under the varying circumstances and operating environments. The firm should ensure that the various PPNR components, including net interest income, non-interest income and non-interest expense, and other key items projected by the firm such as balance sheet positions, RWA, and losses, are projected in a manner that is internally consistent.

The ability to effectively project net interest income is dependent upon the firm’s ability to identify and aggregate current positions and their attributes; project future changes in accruing balances due to a variety of factors; and appropriately translate the impact of these factors and relevant interest rates into net interest income based on assumed conditions. Accordingly, a firm’s current portfolio of interest-bearing assets and liabilities should serve as the foundation for its forward-looking estimates of net interest income.

Non-interest income is derived from a diverse set of sources, including fees and certain realized gains and losses. Non-interest income generally is more susceptible to rapid changes than net interest income, especially if certain market measures move sharply. A firm’s projections should incorporate material factors that could affect the generation of non-interest income under stress, including the firm’s business strategy, the competitive landscape, and changing regulations.

Non-interest expenses include both expenses that are likely to vary with certain stressful conditions and those that are not. Projections of expenses that are closely linked to revenues or balances should vary with projected changes in revenue or balance sheet levels.

3. Aggregating Estimation Results

A firm should have well-documented processes for projecting the size and composition of on- and off-balance sheet positions and RWAs over the planning horizon that feed in to the wider capital planning process (see Appendix H, “Risk-weighted Asset (RWA) Projections”).

A firm should have a consistently executed process for aggregating enterprise-wide stress test projections of losses, revenues, and expenses, including estimating on- and off-balance sheet exposures, and RWAs, and for calculating post-stress capital positions and ratios. The aggregation system should be able to bring together data and information across business lines, portfolios, and risk types and should include the data systems and sources, data reconciliation points, data quality checks, and appropriate internal control points to ensure accurate and consistent projection of financial data within enterprise-wide scenario analysis. Internal processes for aggregating projections from all relevant systems and regulatory templates should be identified and documented. In addition, the beginning points for projections and scenario variables should align with the end of the historical reference period.

Appendix A: Use of Models and Other Estimation Approaches

Projections of losses and PPNR under various scenarios are key components of enterprise-wide stress testing and capital planning. The firm should ensure that its material projection approaches, including any specific processes or methodologies employed, are well supported, transparent, and repeatable over time.

A firm may use either quantitative methods or qualitative approaches for generating projections. A firm is not expected to employ a sophisticated modeled approach, particularly if the firm can demonstrate that a simpler approach, combined with well-supported expert judgment, produces credible and transparent output. A firm can apply simple assumptions to generate losses or PPNR for its non-material portfolios or business lines.

A firm should adhere to supervisory guidance on model risk management (SR-11-7) when using models, and should have sound internal controls around both quantitative and qualitative approaches.

1. *Quantitative Approaches*

If a firm decides to employ quantitative approaches, it is not expected to use any specific quantitative estimation method. Any quantitative approach should be appropriate for the type and materiality of the portfolio or activity for which it is used and the granularity and length of available data. The firm should also ensure that the quantitative approach selected generates credible estimates that are consistent with assumed scenario conditions. A firm should separately estimate losses and PPNR for portfolios or business lines that are either sensitive to different risk drivers or sensitive to risk drivers in a markedly different way, particularly during periods of stress.

a. Use of Data

A firm may use either internal or external data to estimate losses and PPNR as part of its enterprise-wide stress testing and capital planning practices.²⁷ If a firm uses external data to estimate its losses or PPNR, the firm should ensure that the external data reasonably approximate underlying risk characteristics of the firm's portfolios or business lines. Further, the firm should make adjustments to estimation methods or outputs, as appropriate, to account for identified differences in risk characteristics and performance reflected in internal and external data. If internal data are not available, a firm should strive to collect internal data over time to augment its projections.

For material portfolios and business lines, a firm should generally include all available data in its analysis, unless the firm no longer engages in a line of business or its activities have changed such that the firm is no longer exposed to a particular risk. The firm should not selectively exclude data for material portfolios and business lines based on the changing nature of the ongoing business or activity without strong empirical support. For example, excluding certain loans only on the basis that they were underwritten to standards that no longer apply or on the basis that the loans were acquired by the firm is not sound practice.

27. Firms are required to collect and report a substantial amount of risk information to the Federal Reserve on FR Y-14 schedules. These data may help to support the firms' enterprise-wide stress test. See Capital Assessments and Stress Testing information collection, Reporting Forms FR Y-14A, Q, and M.

b. Use of Vendor Models²⁸

A firm should have processes to confirm that any vendor or other third-party models it uses are sound, appropriate for the given task, and implemented properly. A firm should clearly outline limitations and uncertainties associated with vendor models.

2. *Assessing Model Performance*

A firm should use measures to assess model performance that are appropriate for the type of model being used. The firm should outline how each performance measure is evaluated and used. A firm should also assess the sensitivity of material model estimates to key assumptions (see Appendix D, "Sensitivity Analysis and Assumptions Management").

For models used for material portfolios and business lines, a firm should provide supporting information about the models to users of their output, including descriptions of known measurement problems, simplifying assumptions, model limitations, or other ways in which the model exhibits weaknesses in capturing the relationships being modeled. Providing such qualitative information is critical when certain quantitative criteria or tests measuring model performance are lacking.

3. *Qualitative Approaches*

A firm may use a qualitative approach to project losses and PPNR. When using a qualitative approach for material portfolios and business lines, the firm should substantiate assumptions and estimates using analysis of current and past risk drivers and performance, internal risk identification, forward-looking risk assessments, external analysis or other available information. The firm should conduct an initial and ongoing assessment of the performance and viability of the qualitative approach. The processes used in qualitative projection approaches should be transparent and repeatable. The firm should also clearly document material qualitative approaches and key assumptions used.

Qualitative approaches should be subject to independent review, although the review may differ from the review of quantitative approaches or models. The level of independent review should be commensurate with the

28. See SR-13-19/CA-13-21, "Guidance on Managing Outsourcing Risk."

- materiality of the portfolio or business line for which the qualitative approach is used;
- impact of the approach's output on the overall capital results; and
- complexity of the approach.

Firm staff conducting the independent review of the qualitative approaches should *not* be involved in developing, implementing or using the approach. However, this staff can be different than the staff that conducts validation of quantitative approaches or models.

Appendix B: Model Overlays

A firm may need to rely on overrides or adjustments to model output (model overlay) to compensate for model, data, or other known limitations.²⁹ If well-supported, use of a model overlay can represent a sound practice.

A model overlay may be appropriate to address cases of identified weaknesses or limitations in the firm's models that cannot be otherwise addressed, or for select portfolios that have unique risks that are not well captured by the model used for those exposures and activities.³⁰ In contrast, a model overlay that functions as a general "catch all" buffer on top of targeted capital levels to account for model weaknesses generally would not represent sound practice.³¹

As part of its overall documentation of methodologies used in stress testing, a firm should document its use of model overlays.

1. Process for Applying Overlays

A firm should establish a consistent firm-wide process for applying model overlays and for controls around model overlays. The process can vary by model type and portfolio, but should contain some key elements, as described below. This process should be outlined in the firm's

29. For the purposes of this appendix, the term "overlays" will be used to cover overrides, overlays, or other adjustments applied to model output. Firms should follow expectations set forth in SR-11-7, "Supervisory Guidance on Model Risk Management," relating to overlays.

30. Expectations for the use of judgment within model development is discussed in Appendix A, "Use of Models and Other Estimation Approaches."

31. Firms may choose to apply overall capital buffers as an additional conservative measure, beyond overlays applied at the model level. Overall capital buffers should be subject to the same governance processes applicable to model overlays, as described in section 2 of this appendix. However, supervisors emphasize that having such a buffer should not in any way replace sound model risk management practices for overlays at the individual model level or address the need for the overlay at the individual model level.

policies and procedures and include a specific exception process for the use of overlays that do not follow the firm's standards. As part of model development, implementation and use, overlays for material portfolios and business lines should be well documented, supported and communicated to senior management. Model overlays should be applied in an appropriate, systematic, and transparent manner. Model results should also be reported to senior management with and without overlay adjustments.

Model overlays (including those based solely on expert or management judgment) should be subject to validation or some other type of effective challenge.³² Consistent with the materiality principle in SR-11-7, the intensity of model risk management for overlays should be a function of the materiality of the model and overlay. A firm should make efforts to conduct effective challenge of its material overlays prior to their use in capital planning. If such validation or effective challenge is not possible, those instances should be made transparent to users of the model and overlay.

Validation or other type of effective challenge of model overlays may differ from quantitative model validation. Staff responsible for effective challenge should not also be setting the overlay itself or providing significant input to the level or type of overlay. For example, a committee that develops an overlay should not also be responsible for the effective challenge of the overlay. In addition, staff engaging in the effective challenge of model overlays should meet supervisory expectations relating to incentives, competence, and influence (as outlined in SR-11-7).

2. Governance of Overlays

Overlays and adjustments used by a firm should be reviewed and approved at a level within the organization commensurate with the materiality of that overlay or adjustment to overall pro forma results. In general, the purpose and impact of material overlays should be communicated to senior management in a manner that facilitates an understanding of the issues by the firm's senior management. Material overlays to the model—either in isolation or in

32. The term "effective challenge" means critical review by objective, informed parties who have the proper incentives, competence, and influence to challenge the model and its results.

combination—should receive a heightened level of support and scrutiny, up to and including review by the firm’s board of directors (or a designated committee), in instances where the impact on pro forma results is material.

Appendix C: Use of Benchmark Models in the Capital Planning Process

As noted in Appendix A, “Use of Models and Other Estimation Approaches,” a firm should use a variety of methods to assess performance of material models and gain comfort with material model estimates. However, a firm is not expected to use benchmark models in its capital planning process.

Appendix D: Sensitivity Analysis and Assumptions Management

A firm should understand the sensitivity of its stress testing estimates used in capital planning to the various inputs and assumptions. In addition, sensitivity analysis should be used to test the robustness of material quantitative approaches and models and enhance reporting to the firm’s senior management, board of directors, and supervisors. A firm should ensure that it identifies, documents, and manages the use of all key assumptions used in capital planning.

1. Sensitivity Analysis

Understanding and documenting a range of potential outcomes provides insight into the inherent uncertainty and imprecision around pro forma results. A firm should assess the sensitivity of its estimates of capital ratios, losses, revenues, and RWAs to key assumptions and uncertainty across the entire firm’s projections under stress. Through this assessment, a firm should calculate a range of potential estimates based on changes to assumptions and inputs.

A firm should also evaluate the sensitivity of material models to key assumptions to evaluate model performance, assess the appropriateness of assumptions, and understand uncertainty associated with model output.

Sensitivity analysis for capital planning models should be applied in a manner consistent with the expectations outlined in the Federal Reserve’s supervisory guidance on model risk

management (refer to SR-11-7). Sensitivity analysis should be conducted during model development and during model validation to provide information about how models respond to changes in key inputs and assumptions, and how those models perform in stressful conditions. In addition, sensitivity analysis should be applied to understand the range of possible results from material vendor-provided models and vendor-provided scenario forecasts that have opaque or proprietary elements. Sensitivity analysis should be used to provide information to help users of model output interpret results, but does not have to result in changes to models or model outputs. Changes made based on sensitivity analysis should be clearly documented and justified.

A firm should ensure that the key sensitivities are presented to senior management and the board in advance of decision-making around the firm’s capital plan and capital actions. Sensitivity analysis should also be used to inform senior management, and, as appropriate, the board of directors about the potential uncertainty associated with models employed of the firm’s projections under stress.

2. Assumptions Management

A firm should clearly document assumptions when estimating losses, PPNR, and balance sheet, and RWA components. Documentation should include the rationale and empirical support for assumptions and specifically address how those assumptions are consistent with and appropriate under the firm’s scenario conditions.

A firm’s rationale for assumptions used in capital planning should be consistent with the different effects of scenario conditions, shifts in portfolio mix, and growth or decline in balances projected over the planning horizon. For example, the firm should scrutinize and support any assumptions about sizeable loan growth during a severe economic downturn.

A firm should generally use conservative assumptions, particularly in areas of high uncertainty. The firm should provide greater support for assumptions that appear optimistic or otherwise appear to benefit the firm (such as loss reduction or revenue enhancement). A firm should not assume that senior management will be able to realize favorable strategic actions that cannot be reasonably assured in stress scenarios given the high level of uncertainty around market conditions. Further, a firm should not assume that it would have the perfect foresight that would

allow it, for example, to make significant expense reductions in the first quarter of the forecast horizon in anticipation of the forthcoming economic deterioration described in the scenario.

A firm should confirm that key assumptions used in material vendor or other third-party products are transparent and have sufficient support before using the products in stress testing. The firm should limit use of material vendor products whose assumptions are not fully transparent or supported or use those products only in conjunction with another approach or compensating controls (e.g., overlays).

Appendix E: Role of the Internal Audit Function in the Capital Planning Process

A firm's internal audit function should play a key role in evaluating the adequacy of the firm's capital planning process and in assessing whether the risk management and internal control practices supporting that process are comprehensive and effective. A firm should establish an audit program around its capital planning process that is consistent with SR-13-1, "Supplemental Policy Statement on the Internal Audit Function and its Outsourcing."

1. Responsibilities of Audit Function

The internal audit function should identify all auditable processes related to capital planning and develop an associated audit plan. The audit function should also perform substantive testing to ascertain the effectiveness of the control framework supporting the firm's capital planning process, communicate identified limitations and deficiencies to senior management, and communicate material limitations and deficiencies to the board of directors (or the audit committee of the board). The audit function should comprehensively cover the firm's capital planning process.

The internal audit function should perform periodic reviews of all aspects of the internal control framework supporting the capital planning process to ensure that all individual components as well as the entire process are functioning in accordance with supervisory expectations and the firm's policies and procedures. The internal audit function should also review the manner in which deficiencies are identified, tracked, and remediated. Furthermore, the internal audit function should ensure appropriate independent review is occurring at various levels within the capital planning process.

A firm's internal audit staff should have the appropriate competence and stature to identify and escalate key issues when necessary. The internal audit function may also rely on an independent third party external to the firm to complete some of the substantive testing as long as the internal audit function can demonstrate proper independence of the third-party from the area being assessed and provide oversight over the execution and quality of the work.

2. Development of Audit Plan

The internal audit function should have a documented plan describing its strategy to assess the processes and controls supporting the firm's capital planning process. When defining the annual audit universe and audit plan, the internal audit function of a firm should focus on the most significant risks relating to the capital planning process. The firm may leverage existing or regularly scheduled audits to ensure coverage of all the capital planning process components; however, the findings and conclusions of these audits should be incorporated into the overall summary of audit activities and conclusions regarding the firm's capital planning process.

3. Briefings to Senior Management and Board

On an annual basis, the internal audit function should report to senior management and the board of directors on the capital planning process to inform recommendations and decisions on the firm's capital plan. The report should provide an opinion of the capital planning process, a statement of the effectiveness of the controls and processes employed, a status update on previously identified issues and remediation plans, and any open issues or uncertainties related to the firm's capital plan. Any key processes that are not comprehensively reviewed and tested, due to timing or significant changes in processes, should be clearly documented and identified as areas with potential heightened risk.

The internal audit function should track responses to its material findings and report to the board any cases in which senior management is not implementing required changes related to audit findings or is doing so with insufficient intensity.

Appendix F: Capital Policy

A firm's capital policy should describe how the firm manages, monitors, and makes decisions regarding capital planning.³³ The policy should include internal post-stress capital goals and real-time targeted capital levels; guidelines for dividends and stock repurchases; and strategies for addressing potential capital shortfalls.

A firm's capital policy should describe the manner in which consolidated estimates of capital positions are presented to senior management and the board of directors. The capital policy should require staff with responsibility for developing capital estimates to clearly identify and communicate to senior management and board of directors the key assumptions affecting various components that feed into the aggregate estimate of capital positions and ratios. The capital policy should require that aggregated results be directly compared against the firm's stated post-stress capital goals, and that those comparisons are included within the standard reporting to senior management and the board of directors.

1. Post-Stress Capital Goals

Post-stress capital goals should provide specific minimum thresholds for the level and composition of capital that the firm intends to maintain during a stress period. Post-stress capital goals should include any capital measures that are relevant to the firm.

The firm should be able to demonstrate through its own internal analysis, independently of regulatory capital requirements, that remaining at or above its internal post-stress capital goals will allow the firm to continue to operate.

The capital policy should describe how senior management and the board concluded that the firm's post-stress capital goals are appropriate, sustainable in different conditions and environments, and consistent with its strategic objectives, business model, and capital plan. In addition, the capital policy should describe the process by which the firm establishes its post-stress capital goals, and include the supporting analysis underpinning the goals chosen by the firm.

³³. A capital policy is a firm's written assessment of the principles and guidelines used for capital planning, issuance, usage, and distributions. 12 C.F.R. 225.8(d)(7).

A firm should annually review its capital goals, evaluate whether its post-stress capital goals are still appropriate based on changes in operating environment, business mix, or other conditions, and adjust those goals as needed.

A firm should adjust its real-time capital targets (that is the amount of current capital it holds above its post-stress capital goals to ensure it does not fall below those goals under stress) more frequently than it adjusts capital goals, based on changes in the business mix, operating environment or other current conditions and circumstances.

2. Dividends and Stock Repurchases

A firm's capital policy should describe the processes relating to common stock dividend and repurchase decisions, including the processes to determine the timing, form, and amount of all planned distributions. The capital policy should also specify the analysis and metrics that senior management and the board use to make capital distribution decisions. The analysis should include strategic considerations such as new business initiatives, potential acquisitions, and the other relevant factors.

3. Contingency Plans for Capital Shortfalls

A firm's capital policy should include specific capital contingency actions the firm would take to remedy any current or prospective deficiencies in its capital position. The firm's capital contingency plan should reflect strategies for identifying and addressing potential capital shortfalls and specify circumstances under which the board of directors and senior management will revisit planned capital actions or otherwise institute contingency measures. A contingency plan should include a set of thresholds for metrics or events that provide early warning signs of capital deterioration and that trigger management action or scrutiny.³⁴

Capital contingency plans should include options for actions that a firm would consider taking to remedy any current or prospective deficiencies in its capital position, such as reducing or ceasing capital distributions, raising additional capi-

³⁴. Capital contingency plans may include triggers for liquidity, earnings, debt and credit default swap spreads, ratings downgrades, stock performance, supervisory actions, general market stress, or other noncapital metrics.

tal, reducing risk, or employing other means to preserve existing capital. Contingency options in the firm's capital policy should be consequential, realistic, actionable, and comprehensive.

Appendix G: Scenario Design

As part of its capital plan, a firm must use at least one scenario that stresses the specific vulnerabilities of the firm's risk profile and operations, including those related to the company's capital adequacy and financial condition.³⁵ The firm's stress scenario should be at least as severe as the Federal Reserve's severely adverse supervisory scenario, measured in terms of its effect on net income and other elements that affect capital.³⁶

As noted in the core document, a firm should create its stress scenario, either by developing a complete internal scenario, or using the Federal Reserve's supervisory scenarios, adjusted for the firm's idiosyncratic risk profile.

The stress scenario should include stressful circumstances and events that could, on a stand-alone basis or in combination, reduce the firm's capital levels and ratios and potentially impede the firm's ability to operate as a going concern, and cover material risks to which the firm is exposed over the course of an annual planning cycle. A firm's scenario should include factors that capture economy- or market-wide stresses and idiosyncratic risks that can put a strain on the firm. A firm should also take into account conditions and events that have not previously occurred, but that may pose a significant threat to the firm given its exposures, risk profile, and business strategy.

Appendix H: Risk-weighted Asset (RWA) Projections

A firm should maintain a sound process for projecting RWAs over the planning horizon.

35. 12 C.F.R. 225.8(e)(2). In addition, a firm is required to report to the Federal Reserve its projections under a baseline scenario, which captures the firm's view of the likely operating environment over the planning horizon. A firm may use the Board's baseline scenario for its own baseline scenario if the firm can demonstrate that the Board's baseline scenario is appropriate for the firm's own risks, activities, and outlook; however, a firm cannot use the Board's severely adverse scenario for its own stress scenario.

36. For guidance on the severity of the scenarios, a firm should review the Board's "Policy Statement on the Scenario Design Framework for Stress Testing," which sets forth the Board's approach to designing the severely adverse scenario. See 12 C.F.R. 252, appendix A.

The firm's initial and projected RWA calculations should be consistent with applicable regulatory capital requirements.

Starting balances for both on- and off-balance sheet exposures and applicable risk weights form the foundation for estimates of post-stress capital ratios. Therefore, firms should verify carefully the accuracy of these starting balances. Moreover, deficiencies in starting RWA calculations are generally compounded in RWA projections over the planning horizon. A firm should ensure that it has sound controls around its RWA calculation and regulatory reporting processes as part of the firm's broader data governance program.

A firm should ensure that RWA projections are consistent with a given scenario and incorporate the impact of projected changes in exposure amounts and risk characteristics of on- and off-balance sheet exposures under the scenario. A firm should demonstrate that assumptions associated with RWA projections are clearly conditioned on a given scenario and are consistent with stated internal and external business strategies. For example, the firm should demonstrate how projected credit RWAs over the planning horizon are related to projected loan growth under the scenario. A firm should provide documented evidence for the appropriateness of key assumptions used to project RWAs.

Appendix I: Operational Loss Projections

A firm faces a wide range of operational risk in conducting its business operations. Operational losses can arise from various sources, including inadequate or failed internal processes, people, and systems, or from external events, and can differ in frequency and severity. For example, some operational loss events, such as credit card fraud, are often more predictable as they occur at high frequency, but generally have low loss severity. The outcome of other events, such as major litigation, are less certain and can result in outsized losses.

1. Risk Identification Process

A firm should maintain a sound process for estimating operational risk losses in its capital planning process, taking into account the differences in loss characteristics of different operational loss event types. A firm's risk identifica-

tion process should include the evaluation of the type of operational risk loss events to which the firm is exposed and the sensitivity of those events to internal and external operating environments. The firm-specific scenario submitted in a firm's capital plan should capture the firm's material operational risks.

2. Approaches to Operational Loss Estimation

A firm can use a variety of estimation approaches to project operational losses for its enterprise-wide stress testing program, but should not rely on unstable or unintuitive correlations to project operational losses. The firm can use a simple, conservative approach based on historical loss data, such as applying average historical

losses, or maximum historical losses, to project operational losses. A firm should also consider the use of scenario analysis to evaluate the effect of material operational risk events, especially those which are less certain or can result in outsized losses.

3. Use of Data

The firm's operational loss projection approaches should make appropriate use of relevant reference data. The firm should supplement its internal data with relevant external data if the internal data lacks sufficient operational loss history or granularity.

*WHAT'S NEW IN THIS REVISED
SECTION*

This section is being revised to include the March 1, 2016, "Interagency Guidance on Funds Transfer Pricing Related to Funding Contingency Risks." The guidance was issued to address weaknesses observed in large financial institutions' funds transfer pricing (FTP) practices related to funding risk (including interest rate and liquidity components) and contingent liquidity risk. The interagency guidance builds on the principles of sound liquidity risk management that are described below. FTP is an important tool for managing a firm's balance sheet structure and measuring risk-adjusted profitability. By allocating funding and contingent liquidity risks to business lines, products, and activities within a firm, FTP influences the volume and terms of new business and ongoing portfolio composition. If done effectively, FTP promotes more resilient, sustainable business models. (Refer to SR-16-03.)

The March 17, 2010, interagency policy statement on "Funding and Liquidity Risk Management" targets funding and risk-management principles for insured depository institutions, including state member banks. The basic principles presented in this policy statement also apply to bank holding companies (BHCs). The Federal Reserve expects supervised financial institutions and BHCs to manage liquidity risk using processes and systems that are commensurate with their complexity, risk profile, and scope of operations. Liquidity risk-management processes and plans should be well documented and available for supervisory review. (See SR-10-6 and its attachment.)

BHCs are expected to manage and control aggregate risk exposures on a consolidated basis, while recognizing legal distinctions and possible obstacles to cash movements among subsidiaries. Appropriate liquidity risk management is especially important for BHCs since liquidity difficulties can easily spread to both depository and non-depository subsidiaries, particularly in cases of similarly named companies where customers may not always understand the legal distinctions between the holding company and subsidiaries. For this reason, BHCs should ensure that liquidity is sufficient at all levels of the organization to fully accommodate funding needs during periods of stress.

Liquidity risk-management processes and funding programs should take into full account

the institution's lending, investment, and other activities and should ensure that adequate liquidity is maintained at the parent holding company and each of its subsidiaries. These processes and programs should fully incorporate real and potential constraints, including legal and regulatory restrictions, on the transfer of funds among subsidiaries and between subsidiaries and the parent holding company. BHC liquidity should be maintained at levels sufficient to fund holding company and affiliate operations for an extended period of time in a stressed environment when access to normal funding sources are disrupted, without having a negative impact on insured depository institution subsidiaries.

Material nonbank subsidiaries, such as broker-dealers, are expected to have liquidity-management processes and funding programs that reflect the principles outlined in the interagency policy statement guidance below (section 4066.0.1) and are consistent with the subsidiaries' complexity, risk profile, and scope of operations. A nonbank subsidiary that directly accesses market sources of funding and/or manages specific funding programs should pay particular attention to

- maintaining sufficient liquidity, cash flow, and capital strength to service its debt obligations and cover fixed charges;
- assessing the potential that funding strategies could undermine public confidence in the liquidity or stability of subsidiary depository institutions; and
- ensuring the adequacy of policies and practices that address the stability of funding and integrity of the institution's liquidity risk profile as evidenced by funding mismatches and the degree of dependence on potentially volatile sources of short-term funding.

For guidance on liquidity risk-measurement techniques, see section 4020.1, Appendix 1, of the *Commercial Bank Examination Manual*. For the supervisory plans (areas of focus) for BHCs that are designed to help ensure that the funding and liquidity practices of the parent company and its nonbank subsidiaries do not have an adverse impact on the organization's depository institution subsidiaries, see SR-08-8 and section 1050.1.3.3.2 for large complex banking organizations. For the similar supervisory plans for regional banking organizations, see SR-08-9 and

section 1050.2.3.3.2. Both manual sections are titled “Parent Company and Nonbank Funding and Liquidity.”

4066.0.1 APPENDIX A— INTERAGENCY POLICY STATEMENT ON FUNDING AND LIQUIDITY RISK MANAGEMENT

The Board of Governors of the Federal Reserve System (FRB)¹ issued this guidance to provide consistent interagency expectations on sound practices for managing funding and liquidity risk. The guidance summarizes the principles of sound liquidity risk management that the agencies have issued in the past² and, where appropriate, harmonizes these principles with the international statement recently issued by the Basel Committee on Banking Supervision titled “Principles for Sound Liquidity Risk Management and Supervision.”³

Recent events illustrate that liquidity risk management at many financial institutions is in need of improvement. Deficiencies include insufficient holdings of liquid assets, funding risky or illiquid asset portfolios with potentially volatile short-term liabilities, and a lack of meaningful cash flow projections and liquidity contingency plans.

The following guidance reiterates the process that institutions should follow to appropriately identify, measure, monitor, and control their funding and liquidity risk. In particular, the guidance re-emphasizes the importance of cash flow projections, diversified funding sources, stress testing, a cushion of liquid assets, and a formal well-developed contingency funding plan (CFP) as primary tools for measuring and managing liquidity risk. The agencies expect every depository financial institutions⁴ to manage liquidity risk using processes and systems that are commensurate with the institution’s complexity, risk profile, and scope of operations. Liquidity risk management processes and plans should be well documented and available for supervisory review. Failure to maintain an adequate liquidity risk management process will be considered an unsafe and unsound practice.

Liquidity and Liquidity Risk

Liquidity is a financial institution’s capacity to meet its cash and collateral obligations at a reasonable cost. Maintaining an adequate level of liquidity depends on the institution’s ability to efficiently meet both expected and unexpected cash flows and collateral needs without adversely affecting either daily operations or the financial condition of the institution.

Liquidity risk is the risk that an institution’s financial condition or overall safety and soundness is adversely affected by an inability (or perceived inability) to meet its obligations. An institution’s obligations, and the funding sources used to meet them, depend significantly on its business mix, balance-sheet structure, and the cash flow profiles of its on- and off-balance-sheet obligations. In managing their cash flows, institutions confront various situations that can give rise to increased liquidity risk. These include funding mismatches, market constraints on the ability to convert assets into cash or in accessing sources of funds (i.e., market liquidity), and contingent liquidity events. Changes in economic conditions or exposure to credit, market, operation, legal, and reputation risks also can affect an institution’s liquidity risk profile and should be considered in the assessment of liquidity and asset/liability management.

1. The policy statement in section 4066.0.1 is slightly amended to address those institutions supervised by the Federal Reserve. The interagency policy statement was also issued by the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA) (collectively, the agencies)—and the depository institutions those agencies supervise—in conjunction with the Conference of State Bank Supervisors (CSBS). For the complete text of the interagency policy statement see 75 *Fed. Reg.* 13656. The various state banking supervisors may implement this policy statement through their individual supervisory process.

2. For national banks, see the *Comptroller’s Handbook on Liquidity*. For state member banks and bank holding companies, see the Federal Reserve’s *Commercial Bank Examination Manual* (section 4020), *Bank Holding Company Supervision Manual* (section 4010), and *Trading and Capital Markets Activities Manual* (section 2030). For state non-member banks, see the FDIC’s *Revised Examination Guidance for Liquidity and Funds Management* (Trans. No. 2002-01) (Nov. 19, 2001) as well as Financial Institution Letter 84-2008, *Liquidity Risk Management* (August 2008). Also see Basel Committee on Banking Supervision, “Principles for Sound Liquidity Risk Management and Supervision,” (September 2008).

3. Basel Committee on Banking Supervision, “Principles for Sound Liquidity Risk Management and Supervision,” September 2008. See www.bis.org/publ/bcbs144.htm.

4. Unless otherwise indicated, this interagency guidance uses the term “depository financial institutions” or “institutions” to include banks and saving associations.

Sound Practices of Liquidity Risk Management

An institution's liquidity management process should be sufficient to meet its daily funding needs and cover both expected and unexpected deviations from normal operations. Accordingly, institutions should have a comprehensive management process for identifying, measuring, monitoring, and controlling liquidity risk. Because of the critical importance to the viability of the institution, liquidity risk management should be fully integrated into the institution's risk management processes. Critical elements of sound liquidity risk management include:

1. Effective corporate governance consisting of oversight by the board of directors and active involvement by management in an institution's control of liquidity risk.
2. Appropriate strategies, policies, procedures, and limits used to manage and mitigate liquidity risk.
3. Comprehensive liquidity risk measurement and monitoring systems (including assessments of the current and prospective cash flows or sources and uses of funds) that are commensurate with the complexity and business activities of the institution.
4. Active management of intraday liquidity and collateral.
5. An appropriately diverse mix of existing and potential future funding sources.
6. Adequate levels of highly liquid marketable securities, which are free of legal, regulatory, or operational impediments, that can be used to meet liquidity needs in stressful situations.
7. Comprehensive contingency funding plans (CFPs) that sufficiently address potential adverse liquidity events and emergency cash flow requirements.
8. Internal controls and internal audit processes sufficient to determine the adequacy of the institution's liquidity risk management process.

Supervisors will assess these critical elements in their reviews of an institution's liquidity risk management process in relation to its size, complexity, and scope of operations.

Corporate Governance

The board of directors is ultimately responsible for the liquidity risk assumed by the institution. As a result, the board should ensure that the institution's liquidity risk tolerance is estab-

lished and communicated in such a manner that all levels of management clearly understand the institution's approach to managing the trade-offs between liquidity risk and short-term profits. The board of directors or its delegated committee of board members should oversee the establishment and approval of liquidity management strategies, policies and procedures, and review them at least annually. In addition, the board should ensure that it:

- Understands the nature of the liquidity risks of its institution and periodically reviews information necessary to maintain this understanding.
- Establishes executive-level lines of authority and responsibility for managing the institution's liquidity risk.
- Enforces management's duties to identify, measure, monitor, and control liquidity risk.
- Understands and periodically reviews the institution's CFPs for handling potential adverse liquidity events.
- Understands the liquidity risk profiles of important subsidiaries and affiliates as appropriate.

Senior management is responsible for ensuring that board-approved strategies, policies, and procedures for managing liquidity (on both a long-term and day-to-day basis) are appropriately executed within the lines of authority and responsibility designated for managing and controlling liquidity risk. This includes overseeing the development and implementation of appropriate risk measurement and reporting systems, liquid buffers (e.g., cash, unencumbered marketable securities, and market instruments), CFPs, and an adequate internal control infrastructure. Senior management is also responsible for regularly reporting to the board of directors on the liquidity risk profile of the institution.

Senior management should determine the structure, responsibilities, and controls for managing liquidity risk and for overseeing the liquidity positions of the institution. These elements should be clearly documented in liquidity risk policies and procedures. For institutions comprised of multiple entities, such elements should be fully specified and documented in policies for each material legal entity and subsidiary. Senior management should be able to monitor liquidity risks for each entity across the institution on an ongoing basis. Processes should be in place to ensure that the group's senior management is actively monitoring and quickly responding to

all material developments and reporting to the boards of directors as appropriate.

Institutions should clearly identify the individuals or committees responsible for implementing and making liquidity risk decisions. When an institution uses an asset/liability committee (ALCO) or other similar senior management committee, the committee should actively monitor the institution's liquidity profile and should have sufficiently broad representation across major institutional functions that can directly or indirectly influence the institution's liquidity risk profile (e.g., lending, investment securities, and wholesale and retail funding). Committee members should include senior managers with authority over the units responsible for executing liquidity-related transactions and other activities within the liquidity risk management process. In addition, the committee should ensure that the risk measurement system adequately identifies and quantifies risk exposure. The committee also should ensure that the reporting process communicates accurate, timely, and relevant information about the level and sources of risk exposure.

Strategies, Policies, Procedures, and Risk Tolerances

Institutions should have documented strategies for managing liquidity risk and clear policies and procedures for limiting and controlling risk exposures that appropriately reflect the institution's risk tolerances. Strategies should identify primary sources of funding for meeting daily operating cash outflows, as well as seasonal and cyclical cash flow fluctuations. Strategies should also address alternative responses to various adverse business scenarios.⁵ Policies and procedures should provide for the formulation of plans and courses of actions for dealing with potential temporary, intermediate-term, and long-term liquidity disruptions. Policies, procedures, and limits also should address liquidity separately for individual currencies, legal entities, and business lines, when appropriate and material, and should allow for legal, regulatory, and operational limits for the transferability of liquidity as well. Senior management should coordi-

nate the institution's liquidity risk management with disaster, contingency, and strategic planning efforts, as well as with business line and risk management objectives, strategies, and tactics.

Policies should clearly articulate a liquidity risk tolerance that is appropriate for the business strategy of the institution, considering its complexity, business mix, liquidity risk profile, and its role in the financial system. Policies should also contain provisions for documenting and periodically reviewing assumptions used in liquidity projections. Policy guidelines should employ both quantitative targets and qualitative guidelines. For example, these measurements, limits, and guidelines may be specified in terms of the following measures and conditions, as applicable:

1. Cash flow projections that include discrete and cumulative cash flow mismatches or gaps over specified future time horizons under both expected and adverse business conditions.
2. Target amounts of unencumbered liquid asset reserves.
3. Measures used to identify unstable liabilities and liquid asset coverage ratios. For example, these may include ratios of wholesale funding to total liabilities, potentially volatile retail (e.g., high-cost or out-of-market) deposits to total deposits, and other liability dependency measures, such as short-term borrowings as a percent of total funding.
4. Asset concentrations that could increase liquidity risk through a limited ability to convert to cash (e.g., complex financial instruments,⁶ bank-owned (corporate-owned) life insurance, and less marketable loan portfolios).
5. Funding concentrations that address diversification of funding sources and types, such as large liability and borrowed funds dependency, secured versus unsecured funding sources, exposures to single providers of funds, exposures to funds providers by market segments, and different types of brokered deposits or wholesale funding.
6. Funding concentrations that address the term, re-pricing, and market characteristics of funding sources with consideration given to the nature of the assets they fund. This may include diversification targets for short-, medium-, and long-term funding; instrument type and securitization vehicles; and guid-

5. In formulating liquidity management strategies, members of complex banking groups should take into consideration their legal structures (e.g., branches versus separate legal entities and operating subsidiaries), key business lines, markets, products, and jurisdictions in which they operate.

6. Financial instruments that are illiquid, difficult to value, or marked by the presence of cash flows that are irregular, uncertain, or difficult to model.

- ance on concentrations for currencies and geographical markets.
7. Contingent liability exposures such as unfunded loan commitments, lines of credit supporting asset sales or securitizations, and collateral requirements for derivatives transactions and various types of secured lending.
 8. Exposures of material activities, such as securitization, derivatives, trading, transaction processing, and international activities, to broad systemic and adverse financial market events. This is most applicable to institutions with complex and sophisticated liquidity risk profiles.
 9. Alternative measures and conditions that may be appropriate for certain institutions.

Policies also should specify the nature and frequency of management reporting. In normal business environments, senior managers should receive liquidity risk reports at least monthly, while the board of directors should receive liquidity risk reports at least quarterly. Depending upon the complexity of the institution's business mix and liquidity risk profile, management reporting may need to be more frequent. Regardless of an institution's complexity, it should have the ability to increase the frequency of reporting on short notice, if the need arises. Liquidity risk reports should impart to senior management and the board a clear understanding of the institution's liquidity risk exposure, compliance with risk limits, consistency between management's strategies and tactics, and consistency between these strategies and the board's expressed risk tolerance.

Institutions should consider liquidity costs, benefits, and risks in strategic planning and budgeting processes. Significant business activities should be evaluated for both liquidity risk exposure and profitability. More complex and sophisticated institutions should incorporate liquidity costs, benefits, and risks in the internal product pricing, performance measurement, and new product approval process for all material business lines, products, and activities. Incorporating the cost of liquidity into these functions should align the risk-taking incentives of individual business lines with the liquidity risk exposure their activities create for the institution as a whole. The quantification and attribution of liquidity risks should be explicit and transparent at the line management level and should include consideration of how liquidity would be affected under stressed conditions.

Liquidity Risk Measurement, Monitoring, and Reporting

The process of measuring liquidity risk should include robust methods for comprehensively projecting cash flows arising from assets, liabilities, and off-balance-sheet items over an appropriate set of time horizons. For example, time buckets may be daily for very short timeframes or extend out to weekly, monthly, and quarterly for longer time frames. Pro forma cash flow statements are a critical tool for adequately managing liquidity risk. Cash flow projections can range from simple spreadsheets to very detailed reports depending upon the complexity and sophistication of the institution and its liquidity risk profile under alternative scenarios. Given the critical importance that assumptions play in constructing measures of liquidity risk and projections of cash flows, institutions should ensure that the assumptions used are reasonable, appropriate, and adequately documented. Institutions should periodically review and formally approve these assumptions. Institutions should focus particular attention on the assumptions used in assessing the liquidity risk of complex assets, liabilities, and off-balance-sheet positions. Assumptions applied to positions with uncertain cash flows, including the stability of retail and brokered deposits and secondary market issuances and borrowings, are especially important when they are used to evaluate the availability of alternative sources of funds under adverse contingent liquidity scenarios. Such scenarios include, but are not limited to, deterioration in the institution's asset quality or capital adequacy.

Institutions should ensure that assets are properly valued according to relevant financial reporting and supervisory standards. An institution should fully factor into its risk management practices the consideration that valuations may deteriorate under market stress and take this into account in assessing the feasibility and impact of asset sales on its liquidity position during stress events.

Institutions should ensure that their vulnerabilities to changing liquidity needs and liquidity capacities are appropriately assessed within meaningful time horizons, including intraday, day-to-day, short-term weekly and monthly horizons, medium-term horizons of up to one year, and longer-term liquidity needs of one year or more. These assessments should include vulnerabilities to events, activities, and strate-

gies that can significantly strain the capability to generate internal cash.

Stress Testing

Institutions should conduct stress tests regularly for a variety of institution-specific and marketwide events across multiple time horizons. The magnitude and frequency of stress testing should be commensurate with the complexity of the financial institution and the level of its risk exposures. Stress test outcomes should be used to identify and quantify sources of potential liquidity strain and to analyze possible impacts on the institution's cash flows, liquidity position, profitability, and solvency. Stress tests should also be used to ensure that current exposures are consistent with the financial institution's established liquidity risk tolerance. Management's active involvement and support is critical to the effectiveness of the stress testing process. Management should discuss the results of stress tests and take remedial or mitigating actions to limit the institution's exposures, build up a liquidity cushion, and adjust its liquidity profile to fit its risk tolerance. The results of stress tests should also play a key role in shaping the institution's contingency planning. As such, stress testing and contingency planning are closely intertwined.

Collateral Position Management

An institution should have the ability to calculate all of its collateral positions in a timely manner, including the value of assets currently pledged relative to the amount of security required and unencumbered assets available to be pledged. An institution's level of available collateral should be monitored by legal entity, jurisdiction, and currency exposure, and systems should be capable of monitoring shifts between intraday and overnight or term collateral usage. An institution should be aware of the operational and timing requirements associated with accessing the collateral given its physical location (i.e., the custodian institution or securities settlement system with which the collateral is held). Institutions should also fully understand the potential demand on required and available collateral arising from various types of contractual contingencies during periods of both marketwide and institution-specific stress.

Management Reporting

Liquidity risk reports should provide aggregate information with sufficient supporting detail to enable management to assess the sensitivity of the institution to changes in market conditions, its own financial performance, and other important risk factors. The types of reports or information and their timing will vary according to the complexity of the institution's operations and risk profile. Reportable items may include but are not limited to cash flow gaps, cash flow projections, asset and funding concentrations, critical assumptions used in cash flow projections, key early warning or risk indicators, funding availability, status of contingent funding sources, or collateral usage. Institutions should also report on the use of and availability of government support, such as lending and guarantee programs, and implications on liquidity positions, particularly since these programs are generally temporary or reserved as a source for contingent funding.

Liquidity across Currencies, Legal Entities, and Business Lines

A depository institution should actively monitor and control liquidity risk exposures and funding needs within and across currencies, legal entities, and business lines. Also, depository institutions should take into account operational limitations to the transferability of liquidity, and should maintain sufficient liquidity to ensure compliance during economically stressed periods with applicable legal and regulatory restrictions on the transfer of liquidity among regulated entities. The degree of centralization in managing liquidity should be appropriate for the depository institution's business mix and liquidity risk profile.⁷ The agencies expect depository institutions to maintain adequate liquidity both at the consolidated level and at significant legal entities.

Regardless of its organizational structure, it is important that an institution actively monitor and control liquidity risks at the level of individual legal entities, and the group as a whole, incorporating processes that aggregate data across multiple systems in order to develop a group-wide view of liquidity risk exposures. It is also important that the institution identify constraints on the transfer of liquidity within the group.

⁷ Institutions subject to multiple regulatory jurisdictions should have management strategies and processes that recognize the potential limitations of liquidity transferability, as well as the need to meet the liquidity requirements of foreign jurisdictions.

Assumptions regarding the transferability of funds and collateral should be described in liquidity risk management plans.

Intraday Liquidity Position Management

Intraday liquidity monitoring is an important component of the liquidity risk management process for institutions engaged in significant payment, settlement, and clearing activities. An institution's failure to manage intraday liquidity effectively, under normal and stressed conditions, could leave it unable to meet payment and settlement obligations in a timely manner, adversely affecting its own liquidity position and that of its counterparties. Among large, complex organizations, the interdependencies that exist among payment systems and the inability to meet certain critical payments has the potential to lead to systemic disruptions that can prevent the smooth functioning of all payment systems and money markets. Therefore, institutions with material payment, settlement and clearing activities should actively manage their intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions. Senior management should develop and adopt an intraday liquidity strategy that allows the institution to:

1. Monitor and measure expected daily gross liquidity inflows and outflows.
2. Manage and mobilize collateral when necessary to obtain intraday credit.
3. Identify and prioritize time-specific and other critical obligations in order to meet them when expected.
4. Settle other less critical obligations as soon as possible.
5. Control credit to customers when necessary.
6. Ensure that liquidity planners understand the amounts of collateral and liquidity needed to perform payment-system obligations when assessing the organization's overall liquidity needs.

Diversified Funding

An institution should establish a funding strategy that provides effective diversification in the sources and tenor of funding. It should maintain an ongoing presence in its chosen funding markets and strong relationships with funds providers to promote effective diversification of funding sources. An institution should regularly gauge

its capacity to raise funds quickly from each source. It should identify the main factors that affect its ability to raise funds and monitor those factors closely to ensure that estimates of fund raising capacity remain valid.

An institution should diversify available funding sources in the short-, medium-, and long-term. Diversification targets should be part of the medium- to long-term funding plans and should be aligned with the budgeting and business planning process. Funding plans should take into account correlations between sources of funds and market conditions. Funding should also be diversified across a full range of retail as well as secured and unsecured wholesale sources of funds, consistent with the institution's sophistication and complexity. Management should also consider the funding implications of any government programs or guarantees it uses. As with wholesale funding, the potential unavailability of government programs over the intermediate- and long-term should be fully considered in the development of liquidity risk management strategies, tactics, and risk tolerances. Funding diversification should be implemented using limits addressing counterparties, secured versus unsecured market funding, instrument type, securitization vehicle, and geographic market. In general, funding concentrations should be avoided. Undue over-reliance on any one source of funding is considered an unsafe and unsound practice.

An essential component of ensuring funding diversity is maintaining market access. Market access is critical for effective liquidity risk management as it affects both the ability to raise new funds and to liquidate assets. Senior management should ensure that market access is being actively managed, monitored, and tested by the appropriate staff. Such efforts should be consistent with the institution's liquidity risk profile and sources of funding. For example, access to the capital markets is an important consideration for most large complex institutions, whereas the availability of correspondent lines of credit and other sources of wholesale funds are critical for smaller, less complex institutions.

An institution should identify alternative sources of funding that strengthen its capacity to withstand a variety of severe institution-specific and marketwide liquidity shocks. Depending upon the nature, severity, and duration of the liquidity shock, potential sources of funding include, but are not limited to, the following:

1. Deposit growth.
2. Lengthening maturities of liabilities.
3. Issuance of debt instruments.
4. Sale of subsidiaries or lines of business.
5. Asset securitization.
6. Sale (either outright or through repurchase agreements) or pledging of liquid assets.
7. Drawing down committed facilities.
8. Borrowing.

Cushion of Liquid Assets

Liquid assets are an important source of both primary (operating liquidity) and secondary (contingent liquidity) funding at many institutions. Indeed, a critical component of an institution's ability to effectively respond to potential liquidity stress is the availability of a cushion of highly liquid assets without legal, regulatory, or operational impediments (i.e., unencumbered) that can be sold or pledged to obtain funds in a range of stress scenarios. These assets should be held as insurance against a range of liquidity stress scenarios including those that involve the loss or impairment of typically available unsecured and/or secured funding sources. The size of the cushion of such high-quality liquid assets should be supported by estimates of liquidity needs performed under an institution's stress testing as well as aligned with the risk tolerance and risk profile of the institution. Management estimates of liquidity needs during periods of stress should incorporate both contractual and noncontractual cash flows, including the possibility of funds being withdrawn. Such estimates should also assume the inability to obtain unsecured and uninsured funding as well as the loss or impairment of access to funds secured by assets other than the safest, most liquid assets.

Management should ensure that unencumbered, highly liquid assets are readily available and are not pledged to payment systems or clearing houses. The quality of unencumbered liquid assets is important as it will ensure accessibility during the time of most need. An institution could use its holdings of high-quality securities, for example, U.S. Treasury securities, securities issued by U.S. government-sponsored agencies, excess reserves at the central bank or similar instruments, and enter into repurchase agreements in response to the most severe stress scenarios.

Contingency Funding Plan⁸

All financial institutions, regardless of size and complexity, should have a formal CFP that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations. A CFP should delineate policies to manage a range of stress environments, establish clear lines of responsibility, and articulate clear implementation and escalation procedures. It should be regularly tested and updated to ensure that it is operationally sound. For certain components of the CFP, affirmative testing (e.g., liquidation of assets) may be impractical. In these instances, institutions should be sure to test operational components of the CFP. For example, ensuring that roles and responsibilities are up-to-date and appropriate; ensuring that legal and operational documents are up-to-date and appropriate; ensuring that cash and collateral can be moved where and when needed; and ensuring that contingent liquidity lines can be drawn when needed.

Contingent liquidity events are unexpected situations or business conditions that may increase liquidity risk. The events may be institution-specific or arise from external factors and may include:

1. The institution's inability to fund asset growth.
2. The institution's inability to renew or replace maturing funding liabilities.
3. Customers unexpectedly exercising options to withdraw deposits or exercise off-balance-sheet commitments.
4. Changes in market value and price volatility of various asset types.
5. Changes in economic conditions, market perception, or dislocations in the financial markets.
6. Disturbances in payment and settlement systems due to operational or local disasters.

Insured institutions should be prepared for the specific contingencies that will be applicable to them if they become less than Well Capitalized pursuant to Prompt Correction Action (PCA) provisions under the Federal Deposit Insurance Corporation Improvement Act.⁹ Contingencies may include restricted rates paid for deposits, the need to seek approval from the FDIC/NCUA to accept brokered deposits, and the inability to

⁸ Financial institutions that have had their liquidity supported by temporary government programs administered by the Department of the Treasury, Federal Reserve, and/or FDIC should not base their liquidity strategies on the belief that such programs will remain in place indefinitely.

⁹ See 12 USC 1831o, 12 CFR 6 (OCC), 12 CFR 208.40 (FRB), and 12 CFR 325.101 (FDIC).

accept any brokered deposits.¹⁰

A CFP provides a documented framework for managing unexpected liquidity situations. The objective of the CFP is to ensure that the institution's sources of liquidity are sufficient to fund normal operating requirements under contingent events. A CFP also identifies alternative contingent liquidity resources¹¹ that can be employed under adverse liquidity circumstances. An institution's CFP should be commensurate with its complexity, risk profile, and scope of operations. As macroeconomic and institution-specific conditions change, CFPs should be revised to reflect these changes.

Contingent liquidity events can range from high-probability/low-impact events to low-probability/high-impact events. Institutions should incorporate planning for high-probability/low-impact liquidity risks into the day-to-day management of sources and uses of funds. Institutions can generally accomplish this by assessing possible variations around expected cash flow projections and providing for adequate liquidity reserves and other means of raising funds in the normal course of business. In contrast, all financial institution CFPs will typically focus on events that, while relatively infrequent, could significantly impact the institution's operations. A CFP should:

1. *Identify Stress Events.* Stress events are those that may have a significant impact on the institution's liquidity given its specific balance-sheet structure, business lines, organizational structure, and other characteristics. Possible stress events may include deterioration in asset quality, changes in agency credit ratings, PCA capital categories and CAMELS ratings downgrades, widening of credit default spreads, operating losses, declining financial institution equity prices, negative press coverage, or other events that may call into question an institution's ability to meet its obligations.
2. *Assess Levels of Severity and Timing.* The CFP should delineate the various levels of stress severity that can occur during a contingent liquidity event and identify the different stages for each type of event. The events,

stages, and severity levels identified should include temporary disruptions as well as those that might be more intermediate term or longer-term. Institutions can use the different stages or levels of severity identified to design early-warning indicators, assess potential funding needs at various points in a developing crisis, and specify comprehensive action plans. The length of the scenario will be determined by the type of stress event being modeled and should encompass the duration of the event.

3. *Assess Funding Sources and Needs.* A critical element of the CFP is the quantitative projection and evaluation of expected funding needs and funding capacity during the stress event. This entails an analysis of the potential erosion in funding at alternative stages or severity levels of the stress event and the potential cash flow mismatches that may occur during the various stress levels. Management should base such analysis on realistic assessments of the behavior of funds providers during the event and incorporate alternative contingency funding sources. The analysis also should include all material on- and off-balance-sheet cash flows and their related effects. The result should be a realistic analysis of cash inflows, outflows, and funds availability at different time intervals during the potential liquidity stress event in order to measure the institution's ability to fund operations. Common tools to assess funding mismatches include:
 - a. *Liquidity gap analysis*—A cash flow report that essentially represents a base case estimate of where funding surpluses and shortfalls will occur over various future time frames.
 - b. *Stress tests*—A pro forma cash flow report with the ability to estimate future funding surpluses and shortfalls under various liquidity stress scenarios and the institution's ability to fund expected asset growth projections or sustain an orderly liquidation of assets under various stress events.
4. *Identify Potential Funding Sources.* Because liquidity pressures may spread from one funding source to another during a significant liquidity event, institutions should identify alternative sources of liquidity, and ensure ready access to contingent funding sources. In some cases, these funding sources may rarely be used in the normal course of busi-

10. Section 38 of the FDI Act (12 USC 1831o) requires insured depository institutions that are not well capitalized to receive approval prior to engaging in certain activities. Section 38 restricts or prohibits certain activities and requires an insured depository institution to submit a capital restoration plan when it becomes undercapitalized.

11. There may be time constraints, sometimes lasting weeks, encountered in initially establishing lines with FRB and/or FHLB. As a result, financial institutions should plan to have these lines set up well in advance.

ness. Therefore, institutions should conduct advance planning and periodic testing to ensure that contingent funding sources are readily available when needed.

5. *Establish Liquidity Event Management Processes.* The CFP should provide for a reliable crisis management team and administrative structure, including realistic action plans used to execute the various elements of the plan for given levels of stress. Frequent communication and reporting among team members, the board of directors, and other affected managers optimize the effectiveness of a contingency plan during an adverse liquidity event by ensuring that business decisions are coordinated to minimize further disruptions to liquidity. Such events may also require the daily computation of regular liquidity risk reports and supplemental information. The CFP should provide for more frequent and more detailed reporting as the stress situation intensifies.
6. *Establish a Monitoring Framework for Contingent Events.* Institution management should monitor for potential liquidity stress events by using early-warning indicators and event triggers. The institution should tailor these indicators to its specific liquidity risk profile. The early recognition of potential events allows the institution to position itself into progressive states of readiness as the event evolves, while providing a framework to report or communicate within the institution and to outside parties. Early-warning signals may include, but are not limited to, negative publicity concerning an asset class owned by the institution, increased potential for deterioration in the institution's financial condition, widening debt or credit default swap spreads, and increased concerns over the funding of off-balance-sheet items.

To mitigate the potential for reputation contagion, effective communication with counterparties, credit-rating agencies, and other stakeholders when liquidity problems arise is of vital importance. Smaller institutions that rarely interact with the media should have plans in place for how they will manage press inquiries that may arise during a liquidity event. In addition, groupwide contingency funding plans, liquidity cushions, and multiple sources of funding are mechanisms that may mitigate reputation concerns.

In addition to early-warning indicators,

institutions that issue public debt, use warehouse financing, securitize assets, or engage in material over-the-counter derivative transactions typically have exposure to event triggers embedded in the legal documentation governing these transactions. Institutions that rely upon brokered deposits should also incorporate PCA-related downgrade triggers into their CFPs since a change in PCA status could have a material bearing on the availability of this funding source. Contingent event triggers should be an integral part of the liquidity risk monitoring system. Institutions that originate and/or purchase loans for asset securitization programs pose heightened liquidity risk concerns due to the unexpected funding needs associated with an early amortization event or disruption of warehouse funding. Institutions that securitize assets should have liquidity contingency plans that address these risks.

Institutions that rely upon secured funding sources also are subject to potentially higher margin or collateral requirements that may be triggered upon the deterioration of a specific portfolio of exposures or the overall financial condition of the institution. The ability of a financially stressed institution to meet calls for additional collateral should be considered in the CFP. Potential collateral values also should be subject to stress tests since devaluations or market uncertainty could reduce the amount of contingent funding that can be obtained from pledging a given asset. Additionally, triggering events should be understood and monitored by liquidity managers.

Institutions should test various elements of the CFP to assess their reliability under times of stress. Institutions that rarely use the type of funds they identify as standby sources of liquidity in a stress situation, such as the sale or securitization of loans, securities repurchase agreements, Federal Reserve discount window borrowing, or other sources of funds, should periodically test the operational elements of these sources to ensure that they work as anticipated. However, institutions should be aware that during real stress events, prior market access testing does not guarantee that these funding sources will remain available within the same time frames and/or on the same terms.

Larger, more complex institutions can benefit by employing operational simulations to test communications, coordination, and decision making involving managers with different responsibilities, in different geographic locations, or at different operating subsidiaries. Simulations or tests run late in the day can highlight specific

problems, such as difficulty in selling assets or borrowing new funds at a time when business in the capital markets may be less active.

Internal Controls

An institution's internal controls consist of procedures, approval processes, reconciliations, reviews, and other mechanisms designed to provide assurance that the institution manages liquidity risk consistent with board-approved policy. Appropriate internal controls should address relevant elements of the risk management process, including adherence to policies and procedures, the adequacy of risk identification, risk measurement, reporting, and compliance with applicable rules and regulations.

Management should ensure that an independent party regularly reviews and evaluates the various components of the institution's liquidity risk management process. These reviews should assess the extent to which the institution's liquidity risk management complies with both supervisory guidance and industry sound practices, taking into account the level of sophistication and complexity of the institution's liquidity risk profile.¹² Smaller, less-complex institutions may achieve independence by assigning this responsibility to the audit function or other qualified individuals independent of the risk management process. The independent review process should report key issues requiring attention, including instances of noncompliance, to the appropriate level of management for prompt corrective action consistent with approved policy.

4066.0.2 APPENDIX B— INTERAGENCY GUIDANCE ON FUNDS TRANSFER PRICING RELATED TO FUNDING AND CONTINGENT LIQUIDITY RISKS

The Board of Governors of the Federal Reserve System (FRB), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) issued this guidance on funds transfer pricing (FTP) practices related to funding risk (including interest rate and liquidity components) and contingent liquidity risk at large financial institutions (hereafter

12. This includes the standards established in this interagency guidance as well as the supporting material each agency provides in its examination manuals and handbooks directed at their supervised institutions. Industry standards include those advanced by recognized industry associations and groups.

referred to as "firms") to address weaknesses observed in some firms' FTP practices.¹³ The guidance builds on the principles of sound liquidity risk management described in the "Interagency Policy Statement on Funding and Liquidity Risk Management,"¹⁴ and incorporates elements of the international statement issued by the Basel Committee on Banking Supervision titled "Principles for Sound Liquidity Risk Management and Supervision."¹⁵ Refer to SR-16-03.

Background

For purposes of this guidance, FTP refers to a process performed by a firm's central management function that allocates costs and benefits associated with funding and contingent liquidity risks (FTP costs and benefits), as measured at transaction or trade inception, to a firm's business lines, products, and activities. While this guidance specifically addresses FTP practices related to funding and contingent liquidity risks, firms may incorporate other risks in their overall FTP frameworks.

FTP is an important tool for managing a firm's balance sheet structure and measuring risk-adjusted profitability. By allocating funding and contingent liquidity risks to business lines, products, and activities within a firm, FTP influences the volume and terms of new business and ongoing portfolio composition. This process helps align a firm's funding and contingent liquidity risk profile and risk appetite and complements, but does not replace, broader liquidity and interest rate risk management programs (for example, stress testing) that a firm uses to capture certain risks (for example, basis risk). If

13. For purposes of this guidance, large financial institutions include: national banks, federal savings associations and state-chartered banks with consolidated assets of \$250 billion or more, domestic bank and savings and loan holding companies with consolidated assets of \$250 billion or more or foreign exposure of \$10 billion or more, and foreign banking organizations with combined U.S. assets of \$250 billion or more.

14. Refer to: FRB's SR-10-6, "Interagency Policy Statement on Funding and Liquidity Risk Management"; FDIC's FIL-13-2010, "Funding and Liquidity Risk Management Interagency Guidance"; and OCC Bulletin 2010-13, "Final Policy Statement: Interagency Policy Statement on Funding and Liquidity Management."

15. The Basel Committee on Banking Supervision statement on "Principles for Sound Liquidity Risk Management and Supervision" (September 2008) is available at www.bis.org/publ/bcb144.htm.

done effectively, FTP promotes more resilient, sustainable business models. FTP is also an important tool for centralizing the management of funding and contingent liquidity risks for all exposures. Through FTP, a firm can transfer these risks to a central management function that can take advantage of natural offsets, centralized hedging activities, and a broader view of the firm.

Failure to consistently and effectively apply FTP can misalign the risk-taking incentives of individual business lines with the firm's risk appetite, resulting in a misallocation of financial resources. This misallocation can arise in new business and ongoing portfolio composition where the business metrics do not reflect risks taken, thereby undermining the business model. Examples include entering into excessive off-balance sheet commitments and on-balance sheet asset growth because of mispriced funding and contingent liquidity risks.

The 2008 financial crisis exposed weak risk management practices for allocating liquidity costs and benefits across business lines. Several firms "acknowledged that if robust FTP practices had been in place earlier, and if the systems had charged not just for funding but for liquidity risks, they would not have carried the significant levels of illiquid assets and the significant risks that were held off-balance sheet that ultimately led to sizable losses."¹⁶

Funds Transfer Pricing Principles

A firm should have an FTP framework to support its broader risk management and governance processes that incorporates the general principles described in this section and is commensurate with its size, complexity, business activities, and overall risk profile. The framework should incorporate FTP costs and benefits into product pricing, business metrics, and new product approval for all material business lines, products, and activities to align risk-taking incentives with the firm's risk appetite.

Principle 1: A firm should allocate FTP costs and benefits based on funding risk and contingent liquidity risk.

16. Senior Supervisors Group report on "Risk Management Lessons from the Global Financial Crisis of 2008" (October 21, 2009) is available at https://www.newyorkfed.org/medialibrary/media/newsevents/news/banking/2009/SSG_report.pdf.

A firm should have an FTP framework that allocates costs and benefits based on the following risks.

- *Funding risk*, measured as the cost or benefit (including liquidity and interest rate components) of raising funds to finance ongoing business operations, should be allocated based on the characteristics of the business lines, products, and activities that give rise to those costs or benefits (for example, higher costs allocated to assets that will be held over a longer time horizon and greater benefits allocated to stable sources of funding).
- *Contingent liquidity risk*, measured as the cost of holding standby liquidity composed of unencumbered, highly liquid assets, should be allocated to the business lines, products, and activities that pose risk of contingent funding needs during a stress event (for example, draws on credit commitments, collateral calls, deposit run-off, and increasing haircuts on secured funding).

Principle 2: A firm should have a consistent and transparent FTP framework for identifying and allocating FTP costs and benefits on a timely basis and at a sufficiently granular level, commensurate with the firm's size, complexity, business activities, and overall risk profile.

FTP costs and benefits should be allocated based on methodologies that are set forth by a firm's FTP framework. The methodologies should be transparent, repeatable, and sufficiently granular such that they align business decisions with the firm's desired funding and contingent liquidity risk appetite. To the extent a firm applies FTP at an aggregated level to similar products and activities, the firm should include the aggregating criteria in the report on FTP.¹⁷ Additionally, the senior management group that oversees FTP should review the basis for the FTP methodologies. The attachment to this interagency guidance describes illustrative FTP methodologies that a firm may consider when implementing its FTP framework.¹⁸

A firm should allocate FTP costs and benefits, as measured at transaction or trade inception, to the appropriate business line, product, or activity. If a firm retains any FTP costs or benefits in a centrally managed pool pursuant to its FTP framework, it should analyze the implications of

17. See Principle 3 for a discussion of the report on FTP.

18. The FRB, the FDIC, and the OCC will monitor evolving FTP practices in the market and may update or add to the illustrative methodologies in the interagency guidance attachment.

such decisions on business line incentives and the firm's overall risk profile. The firm customarily would include its findings in the report on FTP.

The FTP framework should be implemented consistently across the firm to appropriately align risk-taking incentives. While it is possible to apply different FTP methodologies within a firm due to, among other things, legal entity type or specific jurisdictional circumstances, a firm should generally implement the FTP framework in a consistent manner across its corporate structure to reduce the likelihood of misaligned incentives. If there are implementation differences across the firm, management should analyze the implications of such differences on business line incentives and the firm's overall funding and contingent liquidity risk profile. The firm customarily would include its findings in the report on FTP.

A firm should allocate, report, and update data on FTP costs and benefits at a frequency that is appropriate for the business line, product, or activity. Allocating, reporting, and updating of data should occur more frequently for trading exposures (for example, on a daily basis). Infrequent allocation, reporting, or updating of data for trading exposures (for example, based on month-end positions) may not fully capture a firm's day-to-day funding and contingent liquidity risks. For example, a firm should monitor the age of its trading exposures, and those held longer than originally intended should be reassessed and FTP costs and benefits should be reallocated based on the modified holding period.

A firm's FTP framework should address derivative activities commensurate with the size and complexity of those activities. The FTP framework may consider the fair value of current positions, the rights of rehypothecation for collateral received, and contingent outflows that may occur during a stress event.

To avoid a misalignment of risk-taking incentives, a firm should adjust its FTP costs and benefits as appropriate based on both market-wide and idiosyncratic conditions, such as trapped liquidity, reserve requirements, regulatory requirements, illiquid currencies, and settlement or clearing costs. These idiosyncratic conditions should be contemplated in the FTP framework, and the firm customarily would include a discussion of the implications in the report on FTP.

Principle 3: A firm should have a robust governance structure for FTP, including the production of a report on FTP and oversight from a senior management group and central management function.

A firm should have a senior management group that oversees FTP, which should include a broad range of stakeholders, such as representatives from the firm's asset-liability committee (if separate from the senior management group), the treasury function, and business line and risk management functions. This group should develop the policy underlying the FTP framework, which should identify assumptions, responsibilities, procedures, and authorities for FTP. The policy should be reviewed and updated on a regular basis or when the firm's asset-liability structure or scope of activities undergoes a material change. Further, senior management with oversight responsibility for FTP should periodically, but no less frequently than quarterly, review the report on FTP to ensure that the established FTP framework is being properly implemented.

A firm should also establish a central management function tasked with implementing the FTP framework. The central management function should have visibility over the entire firm's on- and off-balance sheet exposures. Among its responsibilities, the central management function should regularly produce and analyze a report on FTP generated from accurate and reliable management information systems. The report on FTP should be at a sufficiently granular level to enable the senior management group and central management function to effectively monitor the FTP framework (for example, at the business line, product, or activity level, as appropriate). Among other items, all material approvals, such as those related to any exception to the FTP framework, including the reason for the exception, would customarily be documented in the report on FTP. The report on FTP may be standalone or included within a broader risk management report.

Independent risk and control functions and internal audit should provide oversight of the FTP process and assess the report on FTP, which should be reviewed as appropriate to reflect changing business and financial market conditions and to maintain the appropriate alignment of incentives. Lastly, consistent with existing supervisory guidance on model risk management,¹⁹ models used in FTP implementation should be independently validated and regularly reviewed to ensure that the models continue to

19. Refer to: FRB's SR-11-7, "Guidance on Model Risk Management"; OCC Bulletin 2011-12, "Supervisory Guidance on Model Risk Management." Refer to section 2126.0 of this manual.

perform as expected, that all assumptions remain appropriate, and that limitations are understood and appropriately mitigated.

Principle 4: A firm should align business incentives with risk management and strategic objectives by incorporating FTP costs and benefits into product pricing, business metrics, and new product approval.

Through its FTP framework, a firm should incorporate FTP costs and benefits into product pricing, business metrics, and new product approval for all material business lines, products, and activities (both on- and off-balance sheet). The framework, the report on FTP, and any associated management information systems should be designed to provide decision makers sufficient and timely information about FTP costs and benefits so that risk-taking incentives align with the firm's strategic objectives.

The information may be either at the transaction level or, if the transactions have homogeneous funding and contingent liquidity risk characteristics, at an aggregated level. In deciding whether to allocate FTP costs and benefits at the transaction or aggregated level, firms should consider advantages and disadvantages of both approaches when developing the FTP framework. Although transaction-level FTP allocations may add complexity and involve higher implementation and maintenance costs, such allocations may provide a more accurate measure of risk-adjusted profitability. A firm assigning FTP allocations at an aggregated level should have aggregation criteria based on funding and contingent liquidity risk characteristics that are transparent.

There should be ongoing dialogue between the business lines and the central function responsible for allocating FTP costs and benefits to ensure that funding and contingent liquidity risks are being captured and are well-understood for product pricing, business metrics, and new product approval. The business lines should understand the rationale for the FTP costs and benefits, and the central function should understand the funding and contingent liquidity risks implicated by the business lines' transactions. Decisions by senior management to incentivize certain behaviors through FTP costs and benefits customarily would be documented and included in the report on FTP.

Conclusion

A firm should use the principles laid out in this guidance to develop, implement, and maintain an effective FTP framework. In doing so, a firm's risk-taking incentives should better align with its risk management and strategic objectives. The framework should be adequately tailored to a firm's size, complexity, business activities, and overall risk profile.

Interagency Guidance Attachment Illustrative Funds Transfer Pricing Methodologies

March 1, 2016

The Funds Transfer Pricing (FTP) methodologies described below are intended for illustrative purposes only and provide examples for addressing principles set forth in the guidance. A firm's FTP framework should be commensurate with its size, complexity, business activities, and overall risk profile. In designing its FTP framework, a firm may utilize other methodologies that are consistent with the principles set forth in the guidance. Therefore, these illustrative methodologies should not be interpreted as directives for implementing any particular FTP methodology.

Non-Trading Exposures

For non-trading exposures, a firm's FTP methodology may vary based on its business activities and specific exposures. For example, certain firms may have higher concentrations of exposures that have less predictable time horizons, such as non-maturity loans and non-maturity deposits.

Matched-Maturity Marginal Cost of Funding

Matched-maturity marginal cost of funding is a commonly used methodology for non-trading exposures. Under this methodology, FTP costs and benefits are based on a firm's market cost of funds across the term structure (for example, wholesale long-term debt curve adjusted based on the composition of the firm's alternate sources of funding such as Federal Home Loan Bank advances and customer deposits). This methodology incentivizes business lines to generate stable funding (for example, core deposits) by

crediting them the benefit or premium associated with such funding. It also ensures that business lines are appropriately charged the cost of funding for the life of longer-dated assets (for example, a five-year commercial loan). Given that funding costs can change over time, the market cost of funds across the term structure should be derived from reliable and readily available data sources and be well understood by FTP users.

FTP rates should, as closely as possible, match the characteristics of the transaction or the aggregated transactions to which they are applied. In determining the appropriate point on the derived FTP curve for a transaction or pool of transactions, a firm could consider a variety of characteristics, including the holding period, cash flow, re-pricing, prepayments, and expected life of the transaction or pool. For example, for a five-year commercial loan that has a rate that resets every three months and will be held to maturity, the interest rate component of the funding risk could be based on a three-month horizon for determining the FTP cost, and the liquidity component of the funding risk could be based on a five-year horizon for determining the FTP cost. Thus, the total FTP cost for holding the five-year commercial loan would be the combination of these two components.

Contingent Liquidity Risk

A firm may calculate the FTP cost related to non-trading exposure contingent liquidity risk using models based on behavioral assumptions. For example, charges for contingent commitments could be based on their modeled likelihood of drawdown, considering customer drawdown history, credit quality, and other factors; whereas, credits applied to deposits could be based on volatility and modeled behavioral maturity. A firm should document and include all modeling analyses and assumptions in the report on FTP. If behavioral assumptions used in a firm's FTP framework do not align with behavioral assumptions used in its internal stress test for similar types of non-trading exposures, the firm should document and include in the report on FTP these inconsistencies.

Trading Exposures

For trading exposures, a firm could consider a variety of factors, including the type of funding source (for example, secured or unsecured), the market liquidity of the exposure (for example,

the size of the haircut relative to the overall exposure), the holding period of the position, the prevailing market conditions, and any potential impact the chosen approach could have on firm incentives and overall risk profile. If a firm's trading activities are not material, its FTP framework may require a less complex methodology for trading exposures. The following FTP methodologies have been observed for allocating FTP costs for trading exposures.

Weighted Average Cost of Debt (WACD)

WACD is the weighted average cost of outstanding firm debt, usually expressed as a spread over an index. Some firms' practices apply this rate to the amount of an asset expected to be funded unsecured (repurchase agreement market haircuts may be used to delineate between the amount being funded secured and the amount being funded unsecured). A firm using WACD should analyze whether the methodology misaligns risk-taking incentives and document such analyses in the report on FTP.

Marginal Cost of Funding

Marginal cost of funding sets the FTP costs at the appropriate incremental borrowing rate of a firm. Some firms' practices apply a marginal secured borrowing rate to the amount of an asset expected to be funded secured and a marginal unsecured borrowing rate to the amount of an asset expected to be funded unsecured (repurchase agreement market haircuts may be used to delineate between the amount being funded secured and the amount being funded unsecured). A firm using marginal cost of funding should analyze whether the methodology misaligns risk-taking incentives, considering current market rates compared to historical rates, and document such analyses in the report on FTP.

Contingent Liquidity Risk

A firm may calculate the FTP costs related to contingent liquidity risk from trading exposures by considering the unencumbered liquid assets that are held to cover the potential for widening haircuts of trading exposures that are funded secured. If haircuts used in a firm's FTP frame-

work do not align with haircuts used in its internal stress test for similar types of trading exposures, the firm should document and include in the report on FTP these inconsistencies. Haircuts should be updated at a frequency that is appropriate for a firm's trading activities and market conditions.

A firm may also include the FTP costs related to contingent liquidity risk from potential derivative outflows in stressed market conditions, which may be due to, for example, credit rating downgrades, additional termination rights, or market shocks and volatility.