Attachment 2

Technical Overview of Final Rule

Scope of Application

The draft final rule identifies three groups of banks, thrifts, and bank holding companies (together, banks): (1) banks that are required to adopt the advanced approaches (core banks); (2) banks that voluntarily adopt the advanced approaches (opt-in banks); and (3) banks that do not adopt the advanced approaches (general banks). Under the draft final rule, a depository institution (DI) is a core bank if its consolidated total assets are $250 billion or more, its consolidated on-balance sheet foreign exposure is $10 billion or more, or it is a subsidiary of another DI or bank holding company (BHC) that uses the advanced approaches. A BHC is a core bank if its consolidated total assets (excluding assets held by an insurance underwriting subsidiary) are $250 billion or more, its consolidated on-balance sheet foreign exposure is $10 billion or more, or it has a subsidiary DI that uses the advanced approaches. U.S. banks that are owned by a foreign banking organization are subject to the same threshold criteria as U.S. banks owned by U.S. investors. The draft final rule recognizes, however, that there may be situations where application of the advanced approaches at an individual bank is not appropriate. The draft final rule includes a provision that permits a primary Federal supervisor to exclude a bank from the advanced approaches in light of the bank's asset size (including subsidiary DI asset size relative to total bank asset size), level of complexity, risk profile, or scope of operations.

Qualification Process and Transition Rules

Qualification process

Under the draft final rule, a bank preparing to implement the advanced approaches must adopt a written implementation plan, approved by its board of directors, that describes in detail

how the bank complies, or intends to comply, with the rule's qualification requirements. The bank must establish and maintain a comprehensive and sound planning and governance process to oversee implementation efforts described in its plan and demonstrate to its primary Federal supervisor that it meets the qualification requirements for the advanced approaches. In addition, a bank must complete a satisfactory parallel run, as described below. A core bank must adopt an implementation plan no later than six months after the effective date of the rule or the date it first becomes a core bank. An opt-in bank may adopt an implementation plan at any time. Each core or opt-in bank must submit its implementation plan to its primary Federal supervisor at least 60 days before the bank proposes to begin its parallel run: however, the bank's primary Federal supervisor may waive this prior notice requirement.

A bank's implementation plan must assess its state of readiness relative to the qualification requirements for the advanced approaches and include a gap analysis that identifies areas where additional work is needed. The plan must describe how the bank intends to address the gaps it has identified. The plan must address all consolidated subsidiaries and any proposed temporary or permanent exclusion of an immaterial business line, portfolio, or exposure from the advanced approaches. Business lines, portfolios, or exposures that the bank intends to exclude from the advanced approaches must be, in the aggregate, immaterial to the bank. The implementation plan also must include objective, measurable milestones, including delivery dates, and a target date when the bank expects its advanced approaches to be fully operational. For core banks, their plan must include a first transitional floor period start date that is no later than 36 months after the effective date of the final rule or the date the bank becomes a core bank (although this period may be extended by the bank's primary Federal supervisor). Finally, a bank's plan should address steps the bank will take to enhance compliance with the qualification

requirements during its parallel run. A bank's primary Federal supervisor would, through ongoing supervisory dialogue and review, assess the bank's progress relative to its plan and its readiness to move to the advanced approaches.

Transition rules

Before moving to the advanced approaches for risk-based capital purposes, a bank must complete a parallel run that is at least four consecutive calendar quarters, and during which the bank's primary Federal supervisor deems the bank's compliance with the qualification requirements to be satisfactory. During the parallel run, a bank remains subject to the general risk-based capital rules for all applicable regulatory and supervisory purposes, but the bank also must calculate its capital ratios using the advanced approaches and will report pertinent information to its primary Federal supervisor.

A bank's primary Federal supervisor will notify the bank of the date when it may begin to use the advanced approaches for risk-based capital purposes. Before providing this notification, the primary Federal supervisor must determine that the bank fully complies with all of the final rule's qualification requirements and that the bank has an adequate process to ensure ongoing compliance. To ensure a smooth transition to the advanced approaches, the draft final rule includes temporary floors on the amount by which a bank's risk-based capital requirements may decline relative to the general risk-based capital rules, over a period of at least three years. The bank's primary Federal supervisor will advise the bank when it is able to move to a subsequent floor period or out of the transitional floor periods altogether. Table A sets forth the transitional floors.

Table A – Transitional Floors

Transitional floor period	Transitional floor percentage
First floor period	95 percent
Second floor period	90 percent
Third floor period	85 percent

During a bank's transitional periods, the bank must calculate its risk-weighted assets under the general risk-based capital rules and multiply that amount by the appropriate floor percentage from Table A. This product is the bank's "floor-adjusted" risk-weighted assets. Next, the bank must calculate its tier 1 and total risk-based capital ratios using the general risk-based capital rules for the numerator values and floor-adjusted risk-weighted assets for the denominator values. The bank also calculates its tier 1 and total risk-based capital ratios using the draft final rule. In addition, the bank calculates a tier 1 leverage ratio using tier 1 capital as defined in the draft final rule for the ratio's numerator and total average assets as the denominator.

A bank must meet all applicable regulatory and supervisory requirements that are linked to tier 1 and total risk-based capital ratios using the lower of the respective floor-adjusted risk-based capital ratio and the advanced approaches risk-based capital ratio for each applicable ratio. Thus, for a DI using the advanced approaches, the applicable prompt corrective action (PCA) category during the transition periods is determined by reference to the lower of the two tier 1 and total risk-based capital ratios.

Categorization of Exposures

Wholesale exposures

Wholesale exposures include credit exposures to a company, individual, sovereign or other governmental entity. Wholesale exposures are further identified as high-volatility

commercial real estate (HVCRE) or non-HVCRE exposures. An HVCRE exposure is defined as a credit facility that finances or has financed the acquisition, development, or construction of real property, excluding facilities used to finance (i) one- to-four family residential property or (ii) commercial real estate projects meeting certain loan-to-value specifications and borrower equity conditions. Within the wholesale internal-ratings-based (IRB) treatment there are different risk-weight formulas for HVCRE and non-HVCRE exposures.

Retail exposures

Retail exposures generally include exposures to individuals and small exposures to business that are managed as part of a segment of similar exposures, not on an individual exposure basis. There are three subcategories of retail exposures: (1) residential mortgage exposures; (2) qualifying revolving exposures (QREs); and (3) other retail exposures. Residential mortgage exposures include any exposure that is primarily secured by a first or subsequent lien on a one- to four- family residential property (including term loans and revolving home equity lines of credit). An exposure primarily secured by a first or subsequent lien on residential property that is not one- to four-family (that is, multifamily) also is included as a residential mortgage exposure as long as the exposure has both an original and outstanding balance of no more than $1 million.

QREs include exposures to individuals that are revolving, unsecured, and unconditionally cancelable by the bank; have a maximum exposure amount of up to $100,000; and are managed as part of a segment of exposures with homogeneous risk characteristics. This category includes most credit card exposures to individuals and overdraft lines on individual checking accounts.

The other retail subcategory includes exposures to individuals for non-business purposes that are not in the other two retail subcategories and are managed as part of a segment of similar

exposures. This includes, for example, personal term loans, margin loans, auto loans and leases, credit card accounts above $100,000, and student loans. This subcategory also includes exposures for business purposes up to a single borrower threshold of $1 million, if the exposures are managed as part of a segment of similar exposures.

Securitization exposures

Securitization exposures include on-balance sheet and off-balance sheet credit exposures that arise from a traditional or synthetic securitization. A securitization transaction generally is one in which: (i) all or a portion of the credit risk on one or more underlying exposures is transferred to a third party; (ii) the credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority; (iii) performance of the securitization exposure depends on the performance of the underlying exposures; and (iv) all or substantially all of the underlying exposures are financial assets. Securitization exposures could take the form of, among other things, asset- and mortgage-backed securities, loans, lines of credit, liquidity facilities, financial standby letters of credit, credit derivatives and guarantees, servicing assets, servicer cash advance facilities, reserve accounts, credit-enhancing representations and warranties, and credit-enhancing interest-only strips (CEIOs). Exposures resulting from the tranching of the risks of nonfinancial assets (such as project or object finance) generally are treated under the wholesale rules, rather than the securitization rules.

The draft final rule clarifies that operating companies are not securitizations, even if all or substantially all of their assets are financial exposures. Operating companies generally are companies that provide goods or services beyond the business of investing, reinvesting, holding, or trading in financial assets. An equity investment in an operating company, such as a bank, is an equity exposure under the draft final rule and a debt investment in an operating company is a

wholesale exposure under the draft final rule. The draft final rule also provides the primary Federal supervisor with discretion to exclude from the definition of securitization exposure investment firms that exercise substantially unfettered control over the size and composition of their assets, liabilities, and off-balance sheet transactions. In considering this exemption, the primary Federal supervisor will consider an investment firm's leverage, risk profile, and economic substance. Managed collateralized debt obligation vehicles, structured investment vehicles, and similar structures do not exhibit the substantially unfettered control necessary to be eligible for the supervisory exclusion.

Equity exposures

Equity exposures generally include a security or instrument, whether voting or non-voting, that represents a direct or indirect ownership interest in, and a residual claim on, the assets and income of a company; a security or instrument that is mandatorily convertible into an equity exposure; an option or warrant that is exercisable for an equity exposure; and any other security or instrument (other than a securitization exposure) to the extent that its return is based on the performance of an equity exposure.

Qualification Requirements

Because the advanced approaches use bank estimates of certain key risk parameters to determine risk-based capital requirements, they introduce greater complexity to the regulatory framework and require banks using those approaches to have a high level of sophistication in risk measurement and management systems. The qualification requirements are written broadly to accommodate the many ways a bank may design and implement robust internal credit and operational risk measurement and management systems, and to permit industry practice to

evolve. A bank's advanced IRB systems must incorporate five interdependent components in a framework for evaluating credit and operational risk and measuring regulatory capital:

(1) A risk rating and segmentation system that assigns ratings to individual wholesale obligors and exposures and assigns individual retail exposures to segments;

(2) A quantification process that translates the risk characteristics of wholesale obligors and exposures and segments of retail exposures into numerical risk parameters that are used as inputs to the IRB risk-based capital formulas;

(3) An ongoing process that validates the accuracy of the ratings assignments, segmentations and risk parameters;

(4) A data management and maintenance system that supports the advanced approach systems; and

(5) Oversight and control mechanisms that ensure the advanced approach systems are functioning effectively and producing accurate results.

Process and systems requirements

One of the principal objectives of the advanced approaches is to provide appropriate incentives for banks to enhance techniques for measuring and managing their risks. In addition, the advanced approaches are designed to ensure that capital is adequate to support those risks. The draft final rule requires a bank to have a rigorous process for assessing its overall capital adequacy in relation to its total risk profile and a comprehensive strategy for maintaining appropriate capital levels. This process is referred to as the internal capital adequacy assessment process (ICAAP). The fundamental elements of a sound ICAAP include identifying and measuring material risks, setting capital adequacy goals that relate to risk, and ensuring the integrity of internal capital adequacy assessments. The draft final rule notes that in developing

its ICAAP, a bank should be particularly mindful of the limitations of regulatory risk-based capital requirements as a measure of the bank's full risk profile. For example, the risk-based capital rules do not explicitly address exposure to interest rate risk, concentration risk, reputational risk, or other risk types that are difficult to quantify.

The draft final rule requires that the systems and processes a bank uses for risk-based capital purposes be consistent with its internal risk management processes and management information reporting system. This means, for example, that data from the latter processes and systems can be used to verify the reasonableness of the inputs the bank uses for risk-based capital purposes. Consistent with pillar 2 of the New Accord and existing U.S. supervisory expectations and guidance, a bank must internally assess its capital adequacy relative to its overall risk profile. The bank's primary Federal supervisor will evaluate how well the bank is assessing its capital needs relative to its risks and, if deficiencies are identified, the supervisor will take necessary action to ensure that appropriate and prudent levels of capital are maintained.

Risk rating and segmentation systems for wholesale and retail exposures

Wholesale exposures

For wholesale exposures, a bank must have an internal risk rating system that indicates the likelihood of default of each individual obligor. Generally, an obligor is the legal entity or natural person contractually obligated on an exposure. The bank may, however, treat three types of exposures to the same legal entity or natural person as having separate obligors. The exposures that may be treated as having separate obligors are: first, exposures to a legal entity or natural person denominated in different currencies; second, (i) income-producing real estate exposures for which all, or substantially all, of the repayment of the exposure is reliant on cash flows from the real estate serving as collateral; the bank, in economic substance, does not have

recourse to the borrower beyond the real estate serving as collateral for the exposure; and no cross-default or cross-acceleration clauses are in place other than clauses obtained in an abundance of caution; and (ii) other credit exposures to the same legal entity; and third, (i) wholesale exposures to a legal entity who is a debtor-in-possession under the U.S. Bankruptcy Code; and (ii) other credit exposures to the same legal entity or natural person. A bank must assign an internal risk rating to each wholesale obligor, which should reflect the obligor's probability of default (PD). In making this assignment, the bank should consider key obligor attributes, both qualitative and quantitative, such as historic and projected financial performance, trends in key financial performance ratios, financial contingencies, and an assessment of the quality of the obligor's management capabilities.

Under the draft final rule, a wholesale obligor is in default for any wholesale exposure of the bank to the obligor, if (i) the bank considers that the obligor is unlikely to pay its credit obligations to the bank in full, without recourse by the bank to actions such as realizing collateral (if held) or (ii) the obligor is past due more than 90 days on any material credit obligation to the bank. The preamble to the draft final rule notes that the following elements may be indications of unlikeliness to pay:

(i) the bank places the exposure on non-accrual status;

(ii) the bank takes a full or partial charge-off or write-down on the exposure due to the distressed financial condition of the obligor;

(iii) the bank incurs a material credit-related loss in connection with the sale of the exposure or the transfer of the exposure to the held-for-sale, available-for-sale, trading account, or other reporting category;

(iv) the bank consents to a distressed restructuring of the exposure that is likely to result in a diminished financial obligation caused by the material forgiveness or postponement of principal, interest, or fees;

(v) the bank has filed as a creditor of the obligor for purposes of the obligor's bankruptcy; or

(vi) the obligor has sought or has been placed in bankruptcy or similar protection that would avoid repayment of the exposure to the bank.

A bank must capture the estimated loss severity upon default of a wholesale exposure by either directly assigning a loss given default (LGD) estimate to the exposure or by grouping the exposure with other wholesale exposures into loss severity rating grades (reflecting the bank's estimate of LGD of the exposure). PD and LGD are discussed in more detail below. If a single wholesale exposure of the bank is in default, all of the bank's wholesale exposures to that obligor are treated as defaulted for risk-based capital purposes, except for the exceptions noted above.

Retail exposures

For retail exposures, a bank must first subcategorize each exposure as a residential mortgage exposure, a QRE, or an other retail exposure. Within each subcategory the bank must assign the risk parameters PD, LGD, and exposure at default (EAD) to segments of exposures with homogeneous risk characteristics, rather than to individual exposures. Risk characteristics could include, for example, loan-to-value ratios, credit scores, loan terms and structure, geographic location, collateral type, and bank internal estimates of likelihood of default and loss severity given default.

Under the draft final rule, the definition of default for retail exposures is consistent with the past due thresholds in the Federal Financial Institutions Examination Council's (FFIEC)

Uniform Retail Credit Classification and Account Management Policy.[1] Thus, revolving retail exposures and residential mortgages are in default at 180 days past due and other retail exposures are in default at 120 days past due. In addition, a retail exposure is in default if the bank has taken a full or partial charge-off or write-down of principal for credit-related reasons. The draft final rule permits a bank to use the local retail definition of default in non-U.S. jurisdictions for retail exposures held by a bank's non-U.S. subsidiary in that non-U.S. jurisdiction, subject to prior supervisory approval. Default on one retail exposure does not require a bank to treat all other obligations of the same borrower to the bank as defaulted.

Quantification of risk parameters for wholesale and retail exposures

Probability of default (PD)

As noted above, under the draft final rule a bank assigns each wholesale exposure to an internal rating grade and associates a PD with each rating grade. PD for a wholesale exposure to a non-defaulted obligor is the bank's empirically based best estimate of the long-run average one-year default rate for the rating grade over a mix of economic conditions (including economic downturn conditions) sufficient to provide a reasonable estimate of the average one-year default rate over the economic cycle for the rating grade.

A bank also must assign a PD to each segment of retail exposures. PD for a segment of retail exposures is the bank's empirically based best estimate of the long-run average one-year default rate for the exposures in the segment, capturing the average default experience for exposures in the segment over a mix of economic conditions and adjusted upward as appropriate to reflect material seasoning effects. A segment of retail exposures has material seasoning effects if there is a material relationship between the time since origination of exposures within

[1] FFIEC, "Uniform Retail Credit Classification and Account Management Policy," 65 FR 36903 (June 12, 2000).

the segment and the bank's best estimate of the long-run average one-year default rate for the exposures in the segment.

For both wholesale exposures and segments of retail exposures, PD may not be less than 0.03 percent, except for exposures to, or guaranteed by, a sovereign entity and certain other organizations such as the Bank for International Settlements and the International Monetary Fund. For wholesale exposures to defaulted obligors and for segments of defaulted retail exposures, PD is 100 percent.

Loss given default (LGD)

Under the draft final rule, a bank must assign an LGD risk parameter to each wholesale exposure (or loss severity grade) and each segment of retail exposures. The LGD for a segment of residential mortgage exposures (unless principal is guaranteed by the full faith and credit of a sovereign entity) may not be less than 10 percent. LGD generally is defined as the bank's empirically based best estimate of the average economic loss, per dollar of EAD, the bank expects to incur in the event the obligor were to default within a one-year horizon during economic downturn conditions.

Economic downturn conditions for an exposure generally are those conditions in which the aggregate default rates for the exposure's entire wholesale or retail subcategory held by the bank in the exposure's national jurisdiction are significantly higher than average. A bank must consider economic downturn conditions that appropriately reflect its actual exposure profile. A bank should have rigorous and well-documented policies and processes for identifying economic downturn conditions for each exposure subcategory, identifying changes in material relationships between the relevant drivers of default rates and loss rates given default, and incorporating identified relationships into LGD estimates.

Exposure at default (EAD)

The EAD for the on-balance sheet component of a wholesale exposure or segment of retail exposures generally is the bank's GAAP carrying value, including net accrued but unpaid interest and fees (less unrealized gains and plus unrealized losses for available-for-sale securities). For the off-balance sheet component of a wholesale or retail exposure that is a loan commitment, line of credit, trade-related letter of credit, or transaction-related contingency (such as a performance-based standby letter of credit), EAD generally is the bank's best estimate of net additions to the outstanding amount owed the bank, including estimated future additional draws of principal and accrued but unpaid interest and fees, that are likely to occur over a one-year horizon assuming the exposure were to go into default. The estimate of net additions must reflect what would be expected during a period of economic downturn conditions. For most other types of off-balance sheet wholesale or retail exposures such as guarantees, EAD is the notional amount of the exposure. EAD for over-the-counter (OTC) derivative contracts, repo-style transactions, and eligible margin loans is discussed below in the credit risk mitigation (CRM) section.

Effective maturity (M)

A bank also must calculate the effective maturity (M) for each wholesale exposure. For wholesale exposures other than repo-style transactions, eligible margin loans, and OTC derivative contracts subject to a qualifying master netting agreement, M is the weighted-average remaining maturity (measured in years) of the expected contractual cash flows from the exposure, using the undiscounted amounts of the cash flows as weights. A bank may, at its option, use the nominal remaining maturity (measured in years) of the exposure. The M for repo-style transactions, eligible margin loans, and OTC derivative contracts subject to a

qualifying master netting agreement is the weighted-average remaining maturity (measured in years) of the individual transactions subject to the qualifying master netting agreement, with the weight of each individual transaction equal to the notional amount of the transaction.

For most exposures, M is capped at five years and floored at one year. For exposures that have an original maturity of less than one year and are not part of a bank's ongoing financing of the obligor, however, M is floored at one day. Examples of transactions that may qualify for the exemption from the one-year maturity floor include, but are not limited to, amounts due from other banks, bankers' acceptances, and sovereign exposures.

In all cases, the data a bank uses to estimate risk parameters must be relevant to the bank's actual wholesale and retail exposures and of sufficient quality to support the determination of risk-based capital requirements for the exposures. A bank must use the best available data for quantifying the risk parameters, including internal data, external data, or pooled data combining internal and external data elements.

Operational risk

Under the draft final rule, a bank must have an operational risk management process, data and assessment systems, and quantification systems that measure operational risk and determine an appropriate risk-based capital requirement for that risk. The draft final rule defines operational risk as the risk of loss from inadequate or failed internal processes, people, and systems or from external events (including legal risk but excluding strategic and reputational risk). A bank must have an operational risk management function independent from business line management. The operational risk management function is responsible for the design, implementation, and oversight of the bank's operational risk data and assessment systems, operational risk quantification systems, and related processes. A bank also must have a process

to identify, measure, monitor, and manage operational risk in bank products, activities, processes, and systems. This process must provide for the consistent and comprehensive collection of the data needed to estimate the bank's exposure to operational risk. A bank's operational risk management processes are expected to reflect the scope and complexity of its business lines, as well as its corporate organizational structure.

Operational risk data and assessment system

A bank must have an operational risk data and assessment system that incorporates on an ongoing basis the following four elements: (i) internal operational loss event data; (ii) external operational loss event data; (iii) results of scenario analysis; and (iv) assessments of the bank's business environment and internal controls. Operational loss is defined as a loss resulting from an operational loss event, including all expenses associated with an operational loss event except for opportunity costs, foregone revenue, and costs related to risk management and control enhancements implemented to prevent future operational losses. An operational loss event is an event that results in loss and is associated with internal fraud; external fraud; employment practices and workplace safety; clients, products, and business practices; damage to physical assets; business disruption and system failures; or execution, delivery and process management.

Internal operational loss event data include data relating to gross operational loss amounts, dates, recoveries, and relevant causal information for operational loss events occurring at the bank. External loss event data encompass the same general information for relevant operational loss events experienced at organizations other than the bank. These data may be particularly useful in determining a bank's level of exposure to operational risk when internal operational loss event data are limited. Scenario analysis is a systematic process of obtaining expert opinions to derive reasoned estimates of the likelihood and loss impact of plausible high

severity operational loss events. A business environment and internal control factor analysis requires a bank to identify and assess the level and trends in operational risk factors and related control structures at the bank.

Operational risk quantification system

A bank's operational risk quantification system must use its operational risk data and assessment system to measure its operational risk exposure – that is, the 99.9th percentile of the distribution of potential aggregate operational losses over a one-year horizon. The expected value of such a total loss distribution is the bank's expected operational loss (EOL). A bank's unexpected operational loss (UOL) is the difference between its operational risk exposure and its EOL.

In limited circumstances, a bank may not be able to generate a credible estimate of its own operational risk exposure at the 99.9 percent confidence level. In these limited cases, a bank may use an alternative operational risk quantification system subject to approval by the bank's primary Federal supervisor. The alternative approach is not available at the BHC level. The agencies will not approve a bank's proposed alternative approach that includes an allocation of operational risk capital requirements that includes non-DI entities or the benefits of diversification across entities.

Data management and maintenance

A bank must have data management and maintenance systems that adequately support all aspects of the bank's advanced IRB systems for wholesale and retail credit risk, operational risk-related systems, and certain other systems permitted under the draft final rule (such as the internal assessment approach (IAA) for asset-backed commercial paper (ABCP) programs and the internal models approach (IMA) for equity exposures). The bank's data management and

maintenance systems must support the timely and accurate reporting of risk-based capital requirements. The bank must retain sufficient data elements to permit monitoring, validation, and refinement of the bank's advanced systems.

Control and oversight mechanisms and documentation

Under the draft final rule, bank senior management is responsible for ensuring that all components of the bank's advanced systems function effectively and comply with the qualification requirements of the advanced approaches. A bank's board of directors (or designated committee) must review the effectiveness of, and approve, the bank's advanced systems at least annually. To support these responsibilities, a bank must have effective controls and oversight mechanisms to ensure ongoing compliance with the qualification requirements and to maintain the integrity, reliability, and accuracy of the bank's advanced systems. The oversight process should be sufficiently independent of the advanced systems' development, implementation, and operation to ensure the integrity of the component systems.

Validation

A bank must have a process to validate its advanced systems on an ongoing basis. The bank's validation process must be independent of the advanced systems' development, implementation, and operation, or the validation process must be subjected to an independent review of its adequacy and effectiveness. Validation includes three broad components: (i) evaluation of the conceptual soundness of the advanced systems; (ii) ongoing monitoring that includes process verification and comparison of the bank's internal estimates with relevant internal and external data sources or results using other estimation techniques (for example, benchmarking); and (iii) outcomes analysis that includes comparisons of actual outcomes to the bank's internal estimates by backtesting and other methods. Each of these components must be

applied to the bank's risk rating and segmentation systems, risk parameter quantification processes, and internal models that are part of the bank's advanced systems.

Internal audit

A bank must have an internal audit function independent of business line management that at least annually assesses the effectiveness of the controls supporting the bank's advanced systems. Internal audit should review the validation process, including validation procedures, responsibilities, results, timelines, and responsiveness to findings. Further, internal audit should evaluate the depth, scope, and quality of the risk management system review process.

Stress testing

Banks must periodically stress test their advanced systems and manage their regulatory capital position so that they remain at least adequately capitalized during all phases of the economic cycle, including during an economic downturn. Stress testing analysis provides one way of understanding how economic cycles might affect risk-based capital requirements, including migration across rating grades or segments. Banks should identify stress scenarios and assess the effects of the scenarios on key performance measures. The scope of the stress testing should be broad and should include all material portfolios.

Documentation

Finally, a bank must document all material aspects of its advanced systems, including, but not limited to, its internal risk rating and segmentation systems, risk parameter quantification processes, model design, assumptions, and validation results. Documentation should support the requirements for quantification, validation, and control and oversight mechanisms, as well as the bank's broader risk management and reporting needs. Banks should document the rationale for

all material assumptions underpinning their analytical framework and support any subsequent changes to those assumptions.

Ongoing qualification

Banks are required to meet the qualification requirements on an ongoing basis. In addition, banks are expected to improve their systems as they improve data collection and as industry practice evolves. To facilitate supervisory oversight of such system changes, a bank must notify its primary Federal supervisor when it makes material changes to its advanced approach systems or modeling assumptions. If a bank falls out of compliance with the qualification requirements for the advanced approaches, the bank would have to establish a remediation plan acceptable to its primary Federal supervisor.

Calculation of Tier 1 Capital and Total Qualifying Capital

A bank's total qualifying capital is the sum of its tier 1 capital elements and tier 2 capital elements, subject to various limits and restrictions, and minus certain deductions. The tier 1 and tier 2 capital elements generally remain the same as they are currently in the general risk-based capital rules.

A bank must continue to deduct from tier 1 capital goodwill, other intangible assets, and deferred tax assets to the same extent that those are deducted under the general risk-based capital rules. However, a bank does not have to deduct from tier 1 capital certain percentages of the adjusted carrying value of its nonfinancial equity investments as it does under the general risk-based capital rules. Instead, the bank's equity exposures are subject to the equity treatment in the draft final rule.

Under the general risk-based capital rules, a bank generally may include in tier 2 capital its allowance for loan and lease losses (ALLL) up to 1.25 percent of risk-weighted assets. Under

the draft final rule, the ALLL is treated differently. The draft final rule includes a methodology for adjusting risk-based capital requirements based on a comparison of the bank's eligible credit reserves to its expected credit losses (ECL). Eligible credit reserves are defined as all general allowances, including the ALLL, that have been established through a charge against earnings to absorb credit losses associated with on- and off-balance sheet wholesale and retail exposures. If the bank has a shortfall of eligible credit reserves compared to ECL, the bank must deduct 50 percent of the shortfall from tier 1 capital and 50 percent from tier 2 capital. If eligible credit reserves exceed ECL, the excess portion of eligible credit reserves may be included in tier 2 capital up to 0.6 percent of credit risk-weighted assets.

A bank also must deduct from tier 1 capital any gain-on-sale and other high-risk securitization exposures. Certain other securitization exposures are deducted from tier 1 and tier 2 capital (50 percent from each category), as are exposures on certain unsettled and failed capital markets transactions.

For BHCs with a consolidated insurance underwriting subsidiary, the BHC must consolidate the assets of that subsidiary for the purpose of determining risk-weighted assets, but must deduct from regulatory capital an amount equal to the insurance underwriting subsidiary's minimum regulatory capital requirement as determined by its regulator. This deduction is made 50 percent from tier 1 capital and 50 percent from tier 2 capital.

Risk-Weighted Assets for Wholesale Exposures and Retail Exposures

The first step in the risk-weighting process is for a bank to determine which of its exposures falls into each of the four exposure categories described above. The second step involves assigning the wholesale exposures to obligor rating grades and loss severity grades and assigning retail exposures to segments. During the third step, the quantification phase, the bank

assigns the risk parameters PD, LGD, EAD, and, where applicable, M, to the wholesale exposures and retail segments. The quantification phase includes obtaining historical reference data, estimating risk parameters for the reference data, mapping the historical reference data to the bank's current exposures, and assigning risk parameters to exposures.

After assigning the risk parameters, the bank must calculate the dollar risk-based capital requirement for each wholesale exposure and retail segment. To perform the calculation for non-defaulted wholesale exposures and retail segments, the bank must insert the risk parameters into the appropriate IRB risk-based capital formula as specified in Table B and then multiply the output of the formulas (K) by the EAD of each non-defaulted exposure or segment.

Table B – IRB risk-based capital formulas for wholesale exposures to non-defaulted obligors and segments of non-defaulted retail exposures*

Retail	**Capital Requirement (K) Non-Defaulted Exposures**	$K = \left[LGD \times N\left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right]$
	Correlation Factor (R)	For residential mortgage exposures: $R = 0.15$
		For qualifying revolving exposures: $R = 0.04$
		For other retail exposures: $R = 0.03 + 0.13 \times e^{-35 \times PD}$
Wholesale	**Capital Requirement (K) Non-Defaulted Exposures**	$K = \left[LGD \times N\left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right] \times \left(\frac{1 + (M - 2.5) \times b}{1 - 1.5 \times b} \right)$
	Correlation Factor (R)	For HVCRE exposures: $R = 0.12 + 0.18 \times e^{-50 \times PD}$
		For wholesale exposures other than HVCRE exposures: $R = 0.12 + 0.12 \times e^{-50 \times PD}$
	Maturity Adjustment (b)	$b = (0.11852 - 0.05478 \times \ln(PD))^2$

* N(.) means the cumulative distribution function for a standard normal random variable. $N^{-1}(.)$ means the inverse cumulative distribution function for a standard normal random variable. The symbol e refers to the base of the natural logarithm, and the function ln(.) refers to the natural logarithm of the expression within parentheses.

For defaulted exposures, the capital requirement generally is 8 percent multiplied by the EAD of the exposure or segment. To convert the dollar risk-based capital requirements for wholesale exposures and segments of retail exposures into risk-weighted asset amounts, the bank must sum the dollar risk-based capital requirements for all wholesale exposures and retail segments (both defaulted and non-defaulted) and multiply the sum by 12.5 (the inverse of the 8 percent capital charge).

Credit Risk Mitigation (CRM) Techniques

Under the draft final rule, a bank may recognize the risk-mitigating effects of both financial collateral and nonfinancial collateral, as well as guarantees and credit derivatives, for risk-based capital purposes. The bank should have operational procedures and risk management processes that ensure that all documentation used in collateralizing or guaranteeing a transaction is legal, valid, binding, and enforceable under applicable law in the relevant jurisdictions. Although CRM techniques may reduce or transfer credit risk, they simultaneously may increase other risks such as operational, liquidity, and market risks. Accordingly, banks should have robust procedures and processes to control risks, and to monitor the implications of using CRM techniques for the bank's overall credit risk profile.

Collateral

In general, a bank may recognize collateral that secures a wholesale exposure as part of the LGD estimation process and collateral that secures a retail exposure as part of the PD and LGD estimation process. In some limited circumstances, discussed below, a bank may reflect the risk-mitigating effects of financial collateral through an adjustment to the exposure's EAD.

EAD for eligible margin loans, repo-style transactions, and OTC derivatives

A bank may use one of two EAD methodologies – a collateral haircut approach or an internal models approach – instead of an LGD estimation methodology to recognize the benefits of financial collateral in mitigating the counterparty credit risk associated with repo-style transactions, eligible margin loans, collateralized OTC derivative contracts, and groups of such transactions with a single counterparty subject to a qualifying master netting agreement (netting sets). A third methodology, the simple value-at-risk (VaR) methodology, is available for single product netting sets of repo-style transactions and eligible margin loans. These methodologies also may be used to recognize the benefits of any collateral in mitigating the counterparty credit risk associated with repo-style transactions that are included in a bank's VaR-based measure of market risk.

Financial collateral generally is defined as cash on deposit with the bank, gold bullion, certain highly-rated long-term debt securities, investment grade short-term debt instruments, publicly traded equity securities, publicly traded convertible bonds, certain mutual fund shares, and conforming residential mortgages.

Collateral haircut approach

Under the collateral haircut approach, a bank sets EAD equal to the sum of three quantities: (i) the value of the exposure less the value of the collateral; (ii) the absolute value of the net position in a given security multiplied by the market price volatility haircut appropriate to that security; and (iii) the sum of the absolute value of the net position of both cash and securities in each currency that is different from the settlement currency, multiplied by a haircut appropriate to each currency mismatch. To determine the appropriate haircuts, a bank may use standard supervisory haircuts set forth in the draft final rule or its own estimates of haircuts. A

bank must use the standard supervisory haircuts to recognize the benefits of conforming residential mortgage collateral. Use of own estimates of haircuts is subject to prior written approval of the bank's primary Federal supervisor, and the estimated haircuts must reflect certain minimum qualitative and quantitative standards.

Internal models methodology

This methodology requires an internal risk model that captures counterparty credit risk and estimates EAD at the level of a netting set. The internal models methodology is based on variables identified as effective expected exposure (EE) and effective expected positive exposure (EPE). EE is the expected value of the probability distribution of non-negative credit risk exposures to a counterparty at any specified future date before the maturity date of the longest term transaction in the netting set. EPE is the weighted average over time of expected (non-negative) exposures to a counterparty where the weights are the proportion of the time interval that an individual expected exposure represents. The internal models methodology is based on effective EPE rather than EPE to address the concern that EPE may not capture risk arising from the replacement of existing short-term positions over a one-year horizon (rollover risk) or may underestimate the exposures arising from eligible margin loans, repo-style transactions, and OTC derivatives with short-term maturities. EAD is calculated as a multiple of effective EPE. The internal models methodology also includes an adjustment factor for maturity and permits the recognition of collateral agreements subject to various conditions.

VaR methodology

With prior written supervisory approval, a bank may use the simple VaR methodology to estimate EAD for repo-style transactions and eligible margin loans that are subject to a single product qualifying master netting agreement. Under the simple VaR methodology, a bank's

EAD for the netting set is equal to the value of the exposures minus the value of the collateral plus a VaR-based estimate of the potential future exposure (PFE) – that is, the maximum exposure expected to occur on a future date with a high level of confidence. The VaR model must meet certain estimation and holding period requirements and be subject to regular backtesting.

Current exposure methodology for OTC derivatives

A bank also may use a current exposure methodology to determine EAD for OTC derivative contracts. The current exposure methodology for a single OTC derivative contract is similar to the methodology in the general risk-based capital rules, where the EAD is equal to the sum of the bank's current credit exposure and an estimate of the bank's PFE on the derivative contract. The current credit exposure is the greater of the mark-to-market value of the derivative contract or zero. PFE is determined by multiplying the notional amount of a contract by a conversion factor (CF). The current exposure methodology for OTC derivative contracts subject to master netting agreements also is generally the same as the treatment in the general risk-based capital rules.

Guarantees and credit derivatives that cover wholesale exposures

A bank may use either a PD substitution or an LGD adjustment approach or, in certain cases, a double default treatment, to recognize the risk-mitigating effects of an eligible guarantee or eligible credit derivative on a wholesale exposure. Eligible guarantees must be in writing; be unconditional; cover all or a pro rata portion of all payments of the obligor on the reference exposure; be generally non-cancelable by the protection provider; be legally enforceable against the protection provider; and give the beneficiary a direct claim against the protection provider. Eligible credit derivatives include credit default swaps, nth-to-default swaps, or total return

swaps that meet a variety of additional requirements. Under both the PD substitution and LGD adjustment approaches, the protection amount of the guarantee or credit derivative is the effective notional amount reduced by applicable haircuts for maturity mismatch, lack of restructuring coverage, and currency mismatch.

PD substitution and LGD adjustment approaches

Under the PD substitution approach, if the protection amount of the guarantee or credit derivative is greater than or equal to the EAD of the hedged exposure, a bank may substitute the PD associated with the rating grade of the protection provider for the PD associated with the rating grade of the obligor. If the protection amount is less than the EAD of the hedged exposure, the bank must treat the hedged exposure as two separate exposures – one protected and one unprotected.

Under the LGD adjustment approach, if the protection amount of the guarantee or credit derivative is greater than or equal to the EAD of the hedged exposure, the bank's risk-based capital requirement for the hedged exposure is the greater of (i) the risk-based capital requirement for the exposure as calculated under the draft final rule with the LGD adjusted by the bank to reflect the guarantee or credit derivative, and (ii) the risk-based capital requirement for a comparable direct exposure to the protection provider. If the protection amount is less than the EAD of the hedged exposure, the bank must treat the hedged exposure as two separate exposures – one protected and one unprotected.

Double default treatment

The draft final rule also contains a separate risk-based capital methodology for hedged exposures eligible for double default treatment. This treatment recognizes that in certain circumstances the PD substitution approach and LGD adjustment approach do not fully reflect

the risk-mitigating benefits of certain types of guarantees and credit derivatives because the resulting risk-based capital requirement does not consider the joint probability of default of the obligor and the protection provider.

To be eligible for double default treatment, a hedged exposure must be fully covered, or covered on a pro rata basis, by an uncollateralized single-reference-obligor credit derivative or guarantee provided by an eligible double default guarantor. An eligible double default guarantor is a creditworthy, regulated financial firm whose normal business includes the provision of credit protection or the management of a diversified portfolio of credit risk. In addition, before applying double default treatment, a bank must determine that there is not excessive correlation between the creditworthiness of the protection provider and the obligor of the hedged exposure. The bank's process for making this determination is subject to supervisory approval.

The risk-based capital requirement for a hedged exposure subject to double default treatment is a function of the PDs of both obligor and protection provider.

Guarantees and credit derivatives that cover retail exposures

The draft final rule does not specify a methodology for taking guarantees and credit derivatives into account in the segmentation of retail exposures. Likewise, the draft final rule does not explicitly limit the extent to which a bank may reflect guarantees and credit derivatives in the estimation of PD and LGD of retail segments, except by the application of the overall floors on PD and LGD assignments noted earlier. In light of this flexibility, however, the draft final rule notes that banks are expected to limit their use of guarantees in the retail segmentation process and retail risk parameter estimation process to situations where the bank has particularly reliable data about the CRM benefits of such guarantees.

Unsettled Securities, Foreign Exchange, and Commodity Transactions

The draft final rule sets forth explicit risk-based capital requirements for unsettled and failed securities, foreign exchange, and commodities transactions. It has different treatments for delivery-versus-payment (DvP) and payment-versus-payment (PvP) transactions with a normal settlement period, and non-DvP/non-PvP transactions with a normal settlement period. A DvP transaction is one in which the buyer must make payment only if the seller has made delivery of the securities or commodities and vice versa. A PvP transaction is a foreign exchange transaction in which one party must make a final transfer of currencies only if the other party has made a final transfer of currencies. A normal settlement period is one that is equal to or less than the market standard for the underlying instrument and equal to or less than five business days.

For DvP or PvP transactions with a normal settlement period, if the bank's counterparty has not made payment or delivery within five business days after the settlement date, the bank determines its capital charge by multiplying the positive current market value of the transaction by a risk weight that reflects the number of days the settlement is past due. For non-DvP/non-PvP transactions with a normal settlement period, a bank must hold risk-based capital if the bank has made a delivery to its counterparty, but has not received its corresponding deliverables by the end of the same business day. Until five business days after the deliverable is due, the risk-based capital requirement is determined by treating the current market value of the deliverable as a wholesale exposure to the counterparty. Thereafter, the current market value of the deliverable is deducted from capital.

Securitization Exposures

There are three general approaches for determining the risk-based capital requirement for a securitization exposure: the ratings-based approach (RBA), the IAA, and the supervisory

formula approach (SFA). Under the draft final rule, a bank is subject to the following hierarchy. First, as noted above, a bank deducts from capital gain-on sale and CEIOs. Second, if an exposure has an external rating from a nationally recognized statistical rating organization (NRSRO) or has an inferred rating (that is, the exposure is senior to another securitization exposure in the transaction that has an external rating from an NRSRO), the exposure generally is subject to the RBA.

If a securitization exposure does not qualify for the RBA but is an exposure to an ABCP program – such as a credit enhancement or liquidity facility – the bank applies the IAA or the SFA. As a general matter, a bank may use the IAA if it has an internal risk rating system for exposures to ABCP programs that has been approved by its primary Federal supervisor. A bank may use the SFA for exposures not subject to the RBA or IAA if it can calculate a set of risk factors relating to the securitization, including the risk-based capital requirement for the underlying exposures as if they were held directly by the bank. If a bank cannot apply the RBA, IAA, or SFA, it must deduct the securitization exposure from capital.

If a bank provides support to a securitization exposure in excess of the bank's predetermined contractual obligation, it must hold regulatory capital against all of the underlying exposures associated with the securitization as if the exposures had not been securitized and must deduct from tier 1 capital any gain-on-sale resulting from the securitization. The bank also must publicly disclose that it has provided such implicit support and the regulatory impact to the bank of providing such support.

Ratings-based approach (RBA)

Under the RBA, a bank determines the risk-weighted asset amount for a securitization exposure by multiplying the amount of the exposure by a fixed risk weight that depends

primarily on the external or inferred rating of the exposure. An originating bank must use the RBA if its retained securitization exposure has at least two external ratings or inferred ratings; an investing bank must use the RBA if its securitization exposure has one or more external or inferred ratings. The two-rating requirement for originating banks is the only material difference between the treatment of originating banks and investing banks under the securitization framework.

Under the RBA, the risk-based capital requirement per dollar of securitization exposure depends on four factors: (i) the applicable external or inferred rating of the exposure; (ii) whether the rating reflects a long-term or short-term assessment of the exposure's credit risk; (iii) whether the exposure is a senior exposure (that is, has a first priority claim on the cash flows of the underlying exposures); and (iv) a measure of the effective number of underlying exposures in the securitization pool. The assigned risk weights under the RBA range from 7 percent (for certain AAA-rated exposures) to 650 percent (for exposures rated BB-). The draft final rule requires a bank to deduct from regulatory capital any securitization exposure with an external or inferred rating two or more categories below investment grade for long-term ratings or below investment grade for short-term ratings.

Internal assessment approach (IAA)

With prior supervisory approval, the draft final rule permits a bank to compute its risk-based capital requirement for a securitization exposure to an ABCP program using the bank's internal assessment of the credit quality of the securitization exposure. The bank's internal assessment process and the ABCP program must meet certain qualification requirements in the rule, and the securitization exposure must initially be internally rated at least equivalent to investment grade. If a bank uses the IAA for any securitization exposure to an ABCP program it

must use the IAA for all exposures that qualify for the IAA approach. Under the IAA, the bank maps its internal credit assessment to an equivalent external credit rating from an NRSRO and applies the appropriate risk weights under the RBA. This approach is similar to an approach already available to qualifying banks under the general risk-based capital rules for credit enhancements to ABCP programs.

Supervisory formula approach (SFA)

A bank's capital requirement under the SFA depends on a number of inputs, including the amount of the underlying exposures; the size of the securitization exposure; the securitization's effective number of underlying exposures; the risk-based capital requirement and ECL for the underlying exposures as if they were held directly on the bank's balance sheet; and the exposure's credit enhancement level. A bank may only use the SFA if it can calculate each of these inputs on an ongoing basis. Thus, if a bank cannot compute the risk-based capital requirement on the underlying exposures, the bank may not use the SFA. Consistent with the RBA, the SFA imposes a 56 basis point minimum risk-based capital requirement (8 percent of the minimum 7 percent risk weight) per dollar of securitization exposure.

Early amortization provisions

Under the draft final rule, an early amortization provision is defined as a provision that, when triggered, causes investors in the securitization to be repaid before the stated maturity of the securitization exposures, unless the provision is solely triggered by events not related to the performance of the underlying exposures or the originating bank (such as material changes in tax laws or regulations). An originating bank must hold risk-based capital against both its interest and the investors' interest arising from a revolving securitization that contains an early

amortization provision. The investors' interest includes both the drawn and undrawn lines of the underlying exposures that are allocated to the investors in the securitization.

The risk-weighted asset amount with respect to the investors' interest is the product of the following five quantities: (i) the EAD associated with the investors' interest; (ii) an appropriate CF; (iii) the risk-based capital requirement on the underlying exposures; (iv) 12.5; and (v) the proportion of the underlying exposures that are revolving exposures. The CFs vary depending on whether the amortization is controlled or non-controlled and whether the underlying exposures are revolving retail credit facilities that are uncommitted (for example, credit cards) or other revolving facilities (such as a corporate credit facility). Controlled early amortization provisions are those meeting a set of criteria generally related to the repayment schedule and amortization period. The appropriate CF is also a function of how close the securitization transaction is to the early amortization trigger event under the transaction documents.

Equity Exposures

Under the draft final rule, a bank has the option to use either a simple risk weight approach (SRWA) or an IMA for equity exposures that are not exposures to an investment fund.

Simple risk weight approach (SRWA)

Under the SRWA, a bank generally assigns a 300 percent risk weight to publicly traded equity exposures and a 400 percent risk weight to non-publicly traded equity exposures. Certain equity exposures to sovereigns, multilateral institutions, and public sector entities have a risk weight of zero or 20 percent, and certain community development equity investments, hedged equity exposures, and non-significant equity investments up to certain limits are eligible for a 100 percent risk weight. Equity exposures to investment firms with greater than immaterial

leverage that a supervisor has excluded from the securitization treatment generally are risk weighted at 600 percent.

Internal models approach (IMA)

Alternatively, a bank that meets certain minimum quantitative and qualitative requirements on an ongoing basis and obtains written approval from its primary Federal supervisor may use the IMA to determine its risk-based capital requirements for modeled equity exposures. A bank may apply the IMA to only its publicly traded equity exposures or to both its publicly traded and non-publicly traded equity exposures. However, if the bank applies the IMA to its publicly traded equity exposures, it must apply the IMA to all such exposures and if the bank applies the IMA to both its publicly traded and non-publicly traded equity exposures, it must use the IMA for all such exposures. The risk-weighted asset amounts of modeled equity exposures are based on estimates of potential losses on the exposures and are subject to the following floors: 200 percent for publicly traded equity exposures and 300 percent for non-publicly traded equity exposures.

The draft final rule includes three approaches for equity exposures to investment funds, each of which is a variation of a look-through approach.

Operational Risk

Under the draft final rule, a bank's operational risk exposure is the 99.9^{th} percentile of the distribution of potential aggregate operational losses, as generated by the bank's operational risk quantification system over a one-year horizon. In general, a bank's risk-based capital requirement for operational risk is the sum of its EOL and UOL. A bank may base its risk-based capital requirement for operational risk on UOL alone to the extent that the bank can demonstrate to its primary Federal supervisor that it has offset EOL with eligible operational risk

offsets. Generally, eligible operational risk offsets are amounts, not to exceed EOL, that are generated by internal business practices to absorb highly predictable and reasonably stable operational losses, including reserves calculated in a manner consistent with GAAP, and available to cover EOL with a high degree of certainty over a one-year horizon. A bank also may take into account the effects of risk mitigants such as insurance, subject to supervisory approval. A bank must estimate its operational risk exposure both with and without such mitigants. The possible reduction in a bank's risk-based capital requirements for operational risk due to risk mitigants may not exceed 20 percent of the bank's risk-based capital requirement for operational risk.

Disclosure

Pillar 3 of the New Accord, market discipline, complements the risk-based capital requirements and the supervisory review process by encouraging market discipline through enhanced public disclosure. The public disclosure requirements are intended to allow market participants to assess key information about a bank's risk profile and its associated level of capital. Some of the disclosure requirements are new disclosures for banks but others are already required by, or are consistent with, existing GAAP, Securities and Exchange Commission (SEC), or bank regulatory reporting requirements.

The public disclosure requirements generally apply to the top-tier legal entity that is a core or opt-in bank within a consolidated group. In general, a DI that is a subsidiary of a BHC or another DI is not subject to the public disclosure requirements, except that every DI must disclose its total and tier 1 risk-based capital ratios and their components, similar to current requirements. Each bank that is subject to the disclosure requirements must have a formal disclosure policy that addresses the bank's approach for determining the disclosures it makes.

Quantitative disclosures are required quarterly and qualitative disclosures are required annually. Significant changes must be reported in the interim.

The public disclosure requirements are comprised of 11 tables that encompass the following information. Scope of application disclosures include a description of the level of the bank to which the disclosures apply and an outline of any differences in consolidation for accounting and regulatory capital purposes, as well as a description of any restrictions on the transfer of funds and capital within the organization. Capital structure disclosures provide information on various components of regulatory capital. Capital adequacy disclosures provide information about how a bank assesses the adequacy of its capital and require the bank to disclose minimum capital requirements and ratios. Credit risk disclosures provide information on the different types and concentrations of credit risk and the techniques the bank uses to measure, monitor, and mitigate those risks. In addition, disclosures cover securitization, operational risk, equities and interest rate risk in non-trading activities.