

**Top-tier BHCs that meet tier 1 minimums under the current and proposed rule**

Data as of March 31, 2012

**Current rules (Basel I)**

	>= \$500m and <		
	\$10b	>\$10 b	Total
BHC total asset size	877	78	955
Total # top-tier BHCs	877	78	955
Number of BHCs that meet 4% tier 1 minimum today	859	77	936
%	98%	99%	98%
Avg \$ amount of tier 1 in excess of minimum (\$000s)	\$111,428	\$10,479,898	
Avg multiple of tier 1 held / tier 1 required	3.8	3.6	

**Proposed rule (Basel III)**

	>= \$500m and <		
	\$10b	>\$10 b	Total
BHC total asset size	877	78	955
Total # top-tier BHCs	877	78	955
Number of BHCs that meet 6% tier 1 minimum as proposed	810	74	884
%	92%	95%	93%
Average \$ amount of tier 1 in excess of minimum (\$000s)	\$71,715	\$5,658,259	
Average multiple of tier 1 held / tier 1 required	2.1	1.9	

**Top-tier BHCs that do not meet tier 1 minimums under the current and proposed rule**

Data as of March 31, 2012

**Current rules (Basel I)**

	>= \$500m and		
	< \$10b	>\$10 b	Total
BHC total asset size	877	78	955
Total # top-tier BHCs	877	78	955
Number of BHCs that do not meet 4% tier 1 minimum today	18	1	19
%	2%	1%	2%
Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$34,766	-\$497,448	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$625,791	-\$497,448	

**Proposed rule (Basel III)**

	>= \$500m and		
	< \$10b	>\$10 b	Total
BHC total asset size	877	78	955
Total # top-tier BHCs	877	78	955
Number of BHCs that do not meet 6% tier 1 minimum as proposed	67	4	71
%	8%	5%	7%
Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$32,716	-\$688,217	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$2,191,942	-\$2,752,868	

**Proposed rule (Basel III) excluding those who fail tier 1 min today**

	>= \$500m and		
	< \$10b	>\$10 b	Total
BHC total asset size	877	78	955
Total # top-tier BHCs	877	78	955
<u>Tier 1</u>			
Number of BHCs that do not meet 6% tier 1 minimum as proposed	49	3	52
% of total	6%	4%	5%
Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$17,124	-\$309,260	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$839,087	-\$927,781	
<u>Common equity tier 1 (CET1)</u>			
Number of BHCs that do not meet 4.5% CET1 minimum as proposed	54	1	55
% of total	6%	1%	6%
Average \$ amount of CET1 4.5% shortfall of minimum (\$000s)	-\$15,355	-\$21,888	
Aggregate \$ amount of CET1 4.5% shortfall of minimum (\$000s)	-\$829,181	-\$21,888	
Number of BHCs that do not meet 7% CET1 minimum as proposed	150	8	158
% of total	17%	10%	17%
Average \$ amount of CET1 7% shortfall of minimum (\$000s)	-\$23,483	-\$752,523	
Aggregate \$ amount of CET1 7% shortfall of minimum (\$000s)	-\$3,522,450	-\$6,020,186	

**Banks that meet tier 1 minimums under the current and proposed rule**

Data as of March 31, 2012

**Current rules (Basel I)**

	< \$10b	>=\$10b	Total
Bank total asset size			
Total # banks	7,269	107	7,376
Number of banks that meet 4% tier 1 minimum today	7,213	107	7,320
% of total	99%	100%	99%
Avg \$ amount of tier 1 in excess of minimum (\$000s)	\$30,110	\$6,055,069	
Avg multiple of tier 1 held / tier 1 required	5.7	4.1	

**Proposed rule (Basel III)**

	< \$10b	>=\$10b	Total
Bank total asset size			
Total # banks	7,269	107	7,376
Number of banks that meet 6% tier 1 minimum as proposed	7,094	106	7,200
% of total	98%	99%	98%
Average \$ amount of tier 1 in excess of minimum (\$000s)	\$24,184	\$4,153,418	
Average multiple of tier 1 held / tier 1 required	3.7	2.4	

**Banks that do not meet tier 1 minimums under the current and proposed rule**

Data as of March 31, 2012

**Current rules (Basel I)**

	< \$10b	>=\$10b	Total
Bank total asset size			
Total # banks	7,269	107	7,376
Number of banks that do not meet 4% tier 1 minimum today	56	0	56
% of total	1%	0%	1%
Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$2,344	\$0	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$131,254	\$0	

**Proposed rule (Basel III)**

	< \$10b	>=\$10b	Total
Bank total asset size			
Total # banks	7,269	107	7,376
Number of banks that do not meet 6% tier 1 minimum as proposed	175	1	176
% of total	2%	1%	2%
Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$5,303	-\$106,263	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$928,108	-\$106,263	

**Proposed rule (Basel III) excluding those who fail tier 1 min today**

	< \$10b	>=\$10b	Total
Bank total asset size			
Total # banks	7,269	107	7,376

**Tier 1**

Number of banks that do not meet 6% tier 1 minimum as proposed	119	1	120
% of total	2%	1%	2%

Average \$ amount of tier 1 shortfall of minimum (\$000s)	-\$4,273	-\$106,263	
Aggregate \$ amount of tier 1 shortfall of minimum (\$000s)	-\$508,437	-\$106,263	

**Common equity tier 1 (CET1)**

Number of banks that do not meet 4.5% CET1 minimum as proposed	59	0	59
% of total	1%	0%	1%

Average \$ amount of CET1 4.5% shortfall of minimum (\$000s)	-\$6,694	\$0	
Aggregate \$ amount of CET1 4.5% shortfall of minimum (\$000s)	-\$394,934	\$0	

Number of banks that do not meet 7% CET1 minimum as proposed	187	2	189
% of total	3%	2%	3%

Average \$ amount of CET1 7% shortfall of minimum (\$000s)	-\$6,206	-\$196,296	
Aggregate \$ amount of CET1 7% shortfall of minimum (\$000s)	-\$1,160,524	-\$392,592	

### **Impact Analysis Methodology for Basel 3 NPRs**

- Staff conducted an analysis to assess the impact of the proposed changes to the definition of capital (Basel III NPR) and to risk-weighted assets (Standardized Approach NPR) for banks and top-tier bank holding companies using available data, as of March 31, 2012, from the commercial bank Call Reports and the holding company FR Y-9C reports. Because required data was not always available, staff made certain assumptions (listed below) to calculate the Basel III requirements.

#### Definition of capital (numerator of risk-based capital ratios)

- With respect to the regulatory deductions from capital, staff made assumptions regarding the amount of:
  - outstanding DTAs subject to full deduction and the amount subject to the threshold deductions;
  - investments in the capital of unconsolidated financial institutions subject to the threshold deductions; &
  - common equity tier 1 and tier 1 minority interest based on outstanding Class A minority interest.

#### Standardized approach risk-weighted assets (denominator of risk-based capital ratios)

- To estimate Basel III risk-weighted assets, staff used line items from the Call Report and Y-9C to estimate changes in the risk-weighted asset amount for residential mortgage exposures, high-volatility commercial real estate (HVCRE) exposures, past-due loans, and securitizations.
- The risk weight for HVCRE exposures (defined as construction, land development, and other land loans for this analysis; available on the regulatory reports) was increased from a risk-weight of 100% to 150%.
- Residential Mortgage Exposures
  - First-lien residential mortgage exposures as reported on the regulatory reports (currently risk weighted at 50%) were assumed to be category 1 exposures, while junior lien exposures, including home equity lines of credit, (currently risk-weighted at 100%) were assumed to be category 2 exposures.
  - To distribute residential mortgages across the proposed risk weights, which are based on LTV, an LTV distribution for firms' first and second lien mortgage portfolios was estimated using loan LTV data from industry databases (McDash and Corelogic) and then spread across the Category 1 risk weights (35% to 100%) and Category 2 risk weights (100% to 200%), as appropriate.
- Past-due loans (loans past due 90 days or more and nonaccrual loans, excluding residential mortgages and sovereign exposures), which currently are risk-weighted at 100%, were assigned to the 150% risk weight.
- For foreign sovereign exposures, used the public cross-border claims and the foreign-office claims on local residents in non-local currency from the FFIEC 009 report to find a distribution of foreign sovereign exposures by country, which was assumed to be representative across all institutions. Assigned risk weights by country: under Basel I, OECD countries received a zero percent risk weight, while all other countries received a 100% risk weight; under Basel III, assigned countries risk weights according to their CRC ratings. Applied country distribution, with associated risk weight, to foreign debt securities line items from the regulatory report.
- Securitization exposures
  - An interagency analysis was conducted using the simplified supervisory formula approach to calculate risk weights on tranches within 60 securitization transactions downloaded from an industry database (Intex) 15 deals each were selected for credit cards, autos, residential mortgages, and commercial mortgages.
  - To calculate average risk weights under Basel I, each tranche of the selected transactions was assigned a risk weight according to the general risk-based capital rules with certain assumptions. As a result, certain exposures were assigned risk weights according to the ratings-based approach, most mezzanine and junior positions were assumed to receive a 1,250% under the gross-up approach, and low-rated senior positions were assigned a 100% risk weight. To calculate average risk weights under Basel III, the SSFA was applied to each tranche of the selected transactions.
  - The current balance of each transaction was used to calculate a weighted average risk weight across each transaction type. These risk weights were then applied to each bank's value of summed items from the regulatory report for RMBS, CMBS, auto, and credit card.

## I. Steps for estimating the numerator changes for the capital ratios under the Basel 3 proposal

Staff from an inter-agency work group used both qualitative measures (such as discussions with banks), as well as quantitative measures (such as QIS data) to create the assumptions used to estimate capital as proposed in the Basel 3 NPRs.

The assumptions include:

- 40% of a bank's deferred tax assets (DTAs) are used as a proxy for "carry-forward DTAs," which would be subject to full deduction
- 60% of DTAs are used as a proxy for "temporary differences DTAs," which would be subject to strict limits
- 80% of qualifying non-controlling (minority) interests in consolidated subsidiaries is used as a proxy for qualifying "common equity tier 1 minority interest"
- 20% of qualifying non-controlling (minority) interests in consolidated subsidiaries is used as a proxy for qualifying "tier 1 minority interest"
- 40% of investments in unconsolidated subsidiaries and associated companies is used as a proxy for "significant investments in unconsolidated financial institutions in the form of common stock"
- Regarding tier 1 deductions resulting from the corresponding deduction approach, trust preferred securities issued by financial institutions are used as a proxy for investments in the capital of unconsolidated financial institutions

### 1. Basel 3 Common equity tier 1 (CET1) calculation

The following items from the regulatory reports were used in the Basel 3 CET1 numerator calculations:

Item	Banks (Call Report)	BHCs (Y-9C)
Common stock	RCFD3230	BHCK3230
Surplus	RCFD3839	BHCK3240
Retained Earnings	RCFD3632	BHCK3247
AOCI	RCFDb530	BHCKb530
Other equity capital components	RCFDa130	BHCKa130
Qualifying non-controlling (minority) interests in consolidated subsidiaries	RCFDb589	BHCKG214
Goodwill	RCFDb590	BHCKb590
Cumulative change in fair value of all financial liabilities accounted for under a fair value option that is included in retained earnings and is attributable to changes in the bank's own creditworthiness	RCFDf264	BHCKf264
Purchased credit card relationships and nonmortgage servicing assets	RCFDb026	BHCKb026
Net deferred tax assets	RCFD2148	BHCK2148
Investments in unconsolidated subsidiaries and associated companies	RCFD2130	BHCK2130
Mortgage servicing assets	RCFDa590	BHCK6438

### **The Basel 3 CET1 base**

The Basel 3 CET1 base used for the 10 and 15% threshold limitations described below is calculated by adding common stock, surplus, retained earnings, AOCI, other equity capital components, and 80% of qualifying non-controlling (minority) interests in consolidated subsidiaries (CET1 minority interest). Subtracted from that value is goodwill, the cumulative change in fair value of financial liabilities, the purchased credit card relationships and nonmortgage servicing assets, and the 40% of DTAs (“carry-forward DTAs”).

### **The 10 and 15% threshold limitations on MSAs, DTAs, and significant investments in unconsolidated subsidiaries in the form of common stock**

The 10% potential deduction for MSAs, “temporary differences DTAs” and significant investments in unconsolidated financial institutions in the form of common stock is calculated using the CET1 base described above.

The 15% limitation for MSAs, “temporary differences DTAs” and significant investments in unconsolidated financial institutions in the form of common stock is equal to 17.65% of the Basel 3 CET1 base, less the sum of the 10% deductions described above.

### **Basel 3 CET1 capital calculation**

Basel 3 CET1 is equal to the Basel 3 CET1 base, less deductions resulting from the 10% limitations, less deductions resulting from the 15% limitation described above.

## **2. Basel 3 Tier 1 capital calculation**

The following items from the regulatory reports were used in the Basel 3 tier 1 numerator calculations:

<b>Item</b>	<b>Banks (Call Report)</b>	<b>BHCs (Y-9C)</b>
Perpetual preferred stock and related surplus	RCFD3838	BHCK3283
Non-qualifying perpetual preferred stock	RCFDb588	BHCKb588
Qualifying non-controlling (minority) interests in consolidated subsidiaries	RCFDb589	BHCKG214
Trust preferred securities issued by financial institutions (HTM fair value from HC-B)	RCFDg349	BHCKg349
Trust preferred securities issued by financial institutions (AFS fair value from HC-B)	RCFDg351	BHCKg351
Trust preferred securities issued by financial institutions (consolidated from HC-D)	RCFDg299	BHCKg299

### **Basel 3 tier 1 capital calculation**

Basel 3 tier 1 capital is estimated to be equal to the Basel 3 CET1 base plus perpetual preferred stock and related surplus, plus tier 1 minority interest, less non-qualifying perpetual preferred stock and less any amount of investments in the capital of unconsolidated financial institutions above the 10% threshold limitation.

## 2. Basel 3 Tier 2 and total capital calculation

The following items from the regulatory reports were used in the Basel 3 tier 2 and total capital numerator calculations:

Item	Banks (Call Report)	BHCs (Y-9C)
Qualifying subordinated debt and redeemable preferred stock	RCFD5306	BHCKg217
Cumulative perpetual preferred stock includible in Tier 2 capital	RCFDb593	BHCKg218
Allowance for loan and lease losses includible in Tier 2 capital	RCFD5310	BHCK5310
Qualifying restricted core elements (other than cumulative perpetual preferred stock)		BHCKg215
Unrealized gains on AFS equity securities includable in Tier 2 capital	RCFD2221	BHCK2221
Other Tier 2 capital components	RCFDb594	BHCKb594

### **Basel 3 tier 2 capital calculation**

Basel 3 tier 2 is calculated by adding qualifying subordinated debt and redeemable preferred stock, cumulative perpetual preferred stock includible in tier 2 capital, allowance for loan and lease losses includible in tier 2 capital, unrealized gains on available-for-sale securities includable in tier 2 capital, other tier 2 capital components, and qualifying restricted core elements (other than cumulative perpetual preferred stock), which is the value of the trust-preferred securities that were removed from tier 1 capital.

### **Basel 3 total capital calculation**

Basel 3 total capital is calculated by adding tier 1 and tier 2 capital as described above.

## **II. Steps for estimating the denominator changes for the capital ratios under the Basel 3 proposal (standardized approach)**

To determine the impact of the changes to risk-weighted assets under the standardized approach, staff used existing risk-weighted assets (less numerator deductions), and then added the Basel III “impact” for the following categories: foreign sovereign exposures, foreign DI exposures, high volatility commercial real estate (HVCRE), past-due loans, residential mortgage exposures, and securitization exposures.

### 1. “Base” risk-weighted assets and risk-weighted asset impact by category

The “base” (reported) risk-weighted asset value for each bank was first adjusted to reflect any of the capital deductions described in part I (numerator changes). Staff then estimated a change in risk-weighted assets for each category (foreign sovereign exposures, foreign DI exposures, HVCRE, past-due loans, residential mortgage exposures, and securitization exposures) by pulling line items for each category, and comparing the risk-weighted exposure amount under Basel I versus under Basel III.

#### A. *Foreign Sovereign Exposures.*

1) Sum line items RCFD 1742, RCFD 1744, and RCFD 2081 for each bank, finding one value, “sovereign amount” per bank.

2) Sum the exposure amounts from 009 Report line items FCEX C916 and C919 for each country. Find the % by country by dividing total for country over total exposures for all countries for FCEX C916 and C919. Will have one % for each country. This “distribution” will be used for all banks and bank holding companies.

For this analysis:

- Removed countries where there were no exposure values
- Removed lines that were regions or sums of countries (ie only included individual country data)

3) Find appropriate risk weight under Basel I and Basel III per country as outlined below:

#### Basel I (baseline)

4) Exposures to OECD member countries receive a zero percent risk weight, while exposures to all other countries receive a risk weight of 100 percent. Multiply applicable risk weight (zero or 100) by exposure amount per country. Sum the amounts per country, per bank to find risk-weighted exposure amount by asset size group.

#### Basel III

CRC Ratings	Risk Weight
0-1	0%
2	20%
3	50%
4-6	100%
7	150%
No CRC	100%

4) Use CRC table to find appropriate risk weight per country. Multiply risk weight by the distribution percentage found in step 2; then multiply by exposure amount per bank.

#### B. *Foreign DI Exposures.*

1) Pull line RCFD B532 for each bank as “foreign DI amount.”

2) Sum the exposure amounts from 009 Report line items FCEX C915 and C918 for each country. Find the % by country by dividing total for country over total exposures for all countries for FCEX C915 and C918. Will have one % for each country. This “distribution” will be used for all banks and bank holding companies.

3) Find appropriate risk weight under Basel I and Basel III per country as outlined below:

#### Basel I (baseline)

4) Foreign DI exposures to OECD member countries receive a 20 percent risk weight, while exposures to all other countries receive a risk weight of 100 percent. Multiply applicable risk weight (20 or 100) by exposure amount per country.

#### Basel III

4) Use CRC table below to find appropriate risk weight per country. Multiply risk weight by the distribution percentage found in step 2; then multiply by exposure amount per bank.

<b>CRC of Sovereign Incorporation</b>	<b>Risk Weight (%)</b>
0-1	20
2	50
3	100
4-7	150
No CRC	100

### ***C. High Volatility Commercial Real Estate (HVCRE)***

#### Steps for analysis:

1) Pull line item RCONf159 by bank as “HVCRE.”

#### Basel I

2) HVCRE under Basel I is 100% risk-weighted.

#### Basel III

2) HVCRE under Basel III is 150% risk-weighted.

### ***D. Past-due loans***

#### Steps for analysis:

1) Sum line items: rcfd171 rcfd170 rcfd5461 rcfd5460 rcfd1256 rcfd1255 rcfd1253 rcfd1252 rconc229 rconc237 rconc230 rconc239 rcfd167 rcfd1597 rcfd5391 rcfd5390 rcfd5382 rcfd5381 rcfd5379 rcfd5378 rcon3495 rcon3494 rconf183 rconf181 rconf180 rconf182 refnb574 refnb573 rcon5400 rcon5399 rcon3501 rcon3500 rcfd1583 rcfdk215 rcfdk214 rcfdk217 rcfdk218 rcfdb577 rcfdb576 rcfd3506 rcfd3507 rconf177 rconf175 rcfd168 rconf176 rconf174) as “Past Due Loans” per bank.

#### Basel I

2) Past Due loans under Basel I are 100% risk-weighted.

#### Basel III

2) Past Due loans under Basel III are 150% risk-weighted.

### ***E. Residential Mortgage Exposures.***

#### Steps for analysis:

1) Pull line item RCON 5367 (first liens) per bank as “RCON 5367.” Sum line items RCON 1797 and RCON 5368 (junior and revolving liens) for each bank as “RCON 1797+RCON 5368.”

#### Basel I

2) Multiply “RCON 5367” by 50% (RW); multiply “RCON 1797 +RCON 5368” by 100% (RW). Sum these values by bank to find the risk-weighted exposure amount for residential mortgages.

#### Basel III

2) Distribute “RCON 5367” according to table and multiply that amount by appropriate risk weight, per the table. Sum the values by bank. Note for this analysis, used the original LTV category (per ALH). Distributions for Category 1 and Category 2 loans are based on analysis from Paul Calem (document titled “ltv distributions.txt”).

<b>Original LTV Category</b>	<b>80% of First liens are Category 1</b>	<b>Category 1 risk weight</b>	<b>20% of First liens are Category 2</b>	<b>Category 2 risk weight</b>
<= 60	32.73	35%	4.02	100%
> 60 and <= 80	60.81	50%	18.04	100%
> 80 and <= 90	2.89	75%	26.44	100%
>90	3.58	100%	51.5	200%

3) Distribute “RCON 1797 +RCON 5368” according to table and multiply that amount by appropriate risk weight, per the table.

<b>LTV Category</b>	<b>Percent of principal balance by category</b>	<b>Category 2 residential mortgage exposure risk weights</b>
<= 60	22%	100%
> 60 and <= 80	40%	100%
> 80 and <= 90	24%	150%
> 90	14%	200%
<b>Total</b>	100%	

### ***F. Securitization Exposures.***

Approach: The New York RB and the Philadelphia RB provided a file of anonymized securitization data from large banking organizations across five product types (CLOs, non-agency RMBS, Credit Card, Auto, and CMBS) with the necessary data points including an external rating, attachment point and detachment points, and cumulative loss data. For each of these product types, risk weights were

calculated for 25 securities under the Baseline and the SSFA. The average risk weights under the Baseline and the SSFA for these securities were used as a proxy to estimate the impact.

1. For each product type, provide the weighted average for the Baseline RW and the SSFA risk weight.

Type	Baseline Ave RW (Basel I treatment)	SSFA Ave RW (Basel III treatment)
Credit Cards	109%	170.4%
Autos	52%	67%
CMBS	164%	239.5%
RMBS*	365%	445%

\*to find Basel 1 risk weight for RMBS, using interagency-supplied securitization data:

- 1) Used "current" cycle date data only
- 2) anything with a detachment point of 100 (senior) got 100% risk weight, all else got 1250% as "B1 risk weight"
- 3) used current bal to find a weight per transaction
- 4) multiplied weight by B1 risk weight; summed risk weights to find one weighted average risk weight

2. Baseline reporting line items:

Type	Baseline Call Report Line Items	Baseline BHC Line Items
Credit Cards	RCFD B838, RCFD B841	BHCK B838, BHCK B841
Autos	RCFD B846, RCFD B849	BHCK B846, BHCK B849
CMBS	RCFD K146 RCFD K149, RCFD K154, RCFD K157	BHCK K146, BHCK K149, BHCK K154, BHCK K157
RMBS	RCFD G308, RCFD G311, RCFD G320, RCFD G323	BHCK G308, BHCK G311, BHCK G320, BHCK G323,

3. For each product type, aggregate and average the Call Report line items and apply the Baseline (Basel 1) risk weights and SSFA risk weights (Basel 3).

### 3. Calculate impact and Basel III risk-weighted assets

For each category (foreign sovereign exposures, foreign DI exposures, HVCRE, past-due loans, residential mortgage exposures, and securitization exposures), multiplied the line items from the regulatory reports first by the risk weight for Basel I, which represented the risk-weighted assets under Basel I for that category. This step was replicated for Basel III by multiplying the line items from the regulatory reports by the risk weight for Basel III, which represented the risk-weighted assets under Basel III for that category.

The “impact” of Basel III was the Basel III amount per category less the Basel I amount per category, per bank, which represented the increase in risk-weighted assets for that category. The impact amount from each category was added to the “base risk-weighted assets” calculated in step 1 per bank. The sum of the

base risk-weighted assets plus the impacts of each category represented the Basel III risk-weighted asset amount.

**4. Additional Notes:**

- This analysis was replicated for banks and bank holding companies.
- For the bank holding company analysis, used only top-tier BHCs with more than \$500 million in total assets.
- Instances where tier 1, as reported in the Call Report or Y-9C was negative was left in the analysis, assuming that the reported figures were accurate.