

U.S. Basel III Capital Rules – Broad Application with Substantial Increase in Complexity and Required Capital

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On June 7th, the Board of Governors of the Federal Reserve System announced Notices of Proposed Rulemaking (NPRs) for three sets of capital rules that translate the Basel III capital rules into U.S. regulation and a final rule for market risk applicable to banking organizations with significant trading activity. The Boards of the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency also approved the three proposed NPRs and final market risk rules on June 12th. Following a 90-day comment period that ends on September 7, 2012, the NPR guidelines are proposed to begin phasing in on January 1, 2013.

The three NPR guidelines include: (i) regulatory capital rules applicable to all banks, thrifts, and holding companies, except for small bank holding companies with less than \$500 million in assets (all savings and loan holding companies would be included, regardless of size); (ii) a standardized approach to market risk applicable to all banks greater than or equal to \$500 million in assets but less than \$250 billion; and (iii) an advanced approach to market risk applicable to the largest, most internationally active banks (ARBs) greater than or equal to \$250 billion in assets. The Market Risk Final Rules apply to U.S. banking organizations that have significant trading activity with aggregated trading assets and liabilities of at least \$1 billion or 10% of total assets (MRBs). Interestingly, none of the NPRs addresses Basel III liquidity requirements.

Discussed in greater detail herein, when the Basel III capital standards become U.S. regulations, depending on their final form, banks face several changes:

- **INCREASED COMMON EQUITY CAPITAL REQUIREMENTS, INCLUDING 7% COMMON EQUITY TIER 1 CAPITAL**
- **TRUST PREFERRED BEING PHASED-OUT AS TIER 1 FOR ALL BANK HOLDING COMPANIES (WITH VARYING PHASEOUT PERIODS)**
- **GREATER VOLATILITY OF REGULATORY CAPITAL**
- **HIGHER CAPITAL REQUIREMENTS FOR HIGH RISK LENDING**
- **INVESTMENT DECISIONS COMPLICATED BY NON-RELIANCE ON CREDIT RATING**
- **REIT PREFERRED AND OTHER FORMS OF MINORITY INTEREST CAPITAL MAY BECOME MORE POPULAR**

This note examines the scope of application of the NPR to selected institutions, the changes to the definitions of capital, the changes to risk measurement with a primary focus on the standardized approach applicable to all banks other than ARBs or MRBs, the revisions to Prompt Corrective Action (PCA) framework that requires regulatory intervention, and provides views on the implications of these rule changes for all banking organizations. Overall, we believe the agencies have adhered very closely to the Basel III capital framework and where this framework conflicted with current U.S. law, generally opted for the more conservative interpretation. We expect that the greater complexity of these capital rules with 13 deductions/adjustments to common equity along with changes to the risk weighting of assets will challenge many banks to efficiently calculate, track and monitor capital ratios on a quarterly basis. We anticipate substantial commentary from banking organizations on the deduction of unrealized losses on available for sale securities and the deduction of unrealized gains from cash flow hedges as these changes will cause significant volatility in the capital ratios of banking organizations in a rising interest rate environment, which is likely in the near term. Business activities such as mortgage servicing and investment in securitized assets that are penalized in this framework may either be repriced or shift from regulated banking organizations to the unregulated arena (to the extent that sufficient funding is available to finance this shift in business activity).

Scope of Application

After Basel III was initially ratified by the G20 countries in December 2010, many speculated that it would only apply to the largest, most internationally active banks in the U.S. and that mid-size and community banks and thrifts would largely be excluded. But smaller banks represented a significant number and dollar amount of the losses in the most recent financial crisis between 2008 and 2011 with 99% of the number of institutions and 45% of the dollar value of failed bank assets comprised of banks with less than \$15 billion of assets. These facts, along with a strong desire by the regulatory agencies to have a consistent standard for quality of capital and a belief that substantially all insured depository institutions would meet the Basel III capital ratios based on their preliminary modeling, contributed to the decision to apply the Basel III capital rules to all insured depository institutions, savings and loan holding companies, and all bank holding companies with \$500 million or more in assets.

While the definition of capital in the numerator of the Basel III capital ratios is largely the same for small and large banks, the denominator varies based on whether the standardized approach, the advanced approaches or the market risk approaches methodology is used for measuring the risk weighting of assets. ARBs must use an advanced internal ratings-based approach for credit risk and operational risk that distinguishes between different types of counterparty credit risk exposures, securitization exposures and equity exposures and permits the use of internal risk models or supervisory formulas in calculating exposure amounts. The Collins Amendment of the Dodd-Frank Act (DFA) requires an ARB to calculate its risk-based capital requirements under both the general capital rules and the advanced approaches rules (plus the Market Risk Final Rule, if applicable) and use the lower of each of the ratios to determine whether the banking organization meets the minimum risk-based capital requirements.

The chart below summarizes the scope of application of these rules to various types of banking organizations:

	Basel III Capital (NPR)	Standardized Approach (NPR)	Advanced Approaches (NPR)	Market Risk Final (RULE)
National banks	X	X		
State members banks	X	X		
State nonmember banks	X	X		
State and federal savings assoc.	X	X		
BHCs with \$500mm or more in assets	X	X		
S&L holding companies (U.S. based)	X	X		
BHCs and S&L holding companies with \$250B + in assets or \$10B + in foreign exposure	X	X	X	X
U.S. banking organizations with trading assets of \$1B + or 10% of total assets	X			X

Capital Ratio Summary

The fully phased in ratio requirements proposed in the NPRs are shown below, with the ratio definitions provided in *Appendix A* and the phase-in schedule provided in *Appendix B*.

- **Common Equity Tier 1 Capital (7%)** – a new ratio, includes a minimum requirement of 4.5% plus 2.5% capital conservation buffer
- **Tier 1 Capital (8.5%)** – minimum requirement of 6% plus 2.5% capital conservation buffer
- **Total Capital (10.5%)** – minimum requirement of 8% plus 2.5% capital conservation buffer
- **Tier 1 Leverage Ratio (4%)** – minimum requirement of 4% tier 1 capital divided by average on-balance sheet assets less amounts deducted from tier 1 capital
- **Supplementary Leverage Ratio (3%)** – only applicable to ARBs; minimum requirement of 3% of tier 1 capital to total leverage exposure (including on-balance sheet and off-balance sheet exposures)

Among these ratios, the common equity tier 1 capital ratio (CET1) is new and is comprised of common equity less a number of regulatory deductions and adjustments mandated by Basel III shown below. Under previous U.S. regulatory capital guidelines, common equity was required to be a majority of tier 1 capital (i.e. at least 51%). With a CET1 ratio of 7%, the Basel III rules now stipulate that common equity (as adjusted) represents 82% of Tier 1 Capital (7%/8.5%) which substantially increases the amount and quality of capital thereby accomplishing one of the primary objectives of Basel III. However, this accomplishment comes at a cost. By increasing from 51% to 82% the minimum percentage of tier 1 capital comprised by common equity, banking organizations will face an increase in their after-tax cost of capital as common equity is generally the most expensive form of capital. Some academics have argued that by increasing the common equity buffer in bank capital structure, the risk of the banking organization would be lowered and investors would be willing to accept lower returns on common equity as a result. However, as will be discussed in more detail below, the deductions and adjustments to the calculation of CET1 capital ratio combined with the changes to the risk weighting calculation will add volatility to the quarterly capital calculation that may temper any perceived investor benefit of higher common equity levels.

In addition to the Capital Conservation Buffer, ARBs would be subject to a Countercyclical Capital Buffer of up to 2.5% of total risk weighted assets during periods when excessive private sector credit growth poses a risk of above normal losses. The Countercyclical Capital Buffer would initially be set to 0% in the U.S. but would increase up to 2.5% if the U.S. regulatory agencies determined on an interagency basis that there is “excessive credit in the markets” that could subsequently lead to “widespread market failures.” The ARBs would generally be provided with at least 12 months notice of the Capital Conservation Buffer prior to implementation and the buffer amount would generally return to 0% within 12 months of its effective date.

The 29 largest global systemically important financial institutions (Global SIFIs) may also be required to hold approximately 2.5% of common equity or other fully loss absorbing capital to build up a capital cushion against excess credit risk in the banking system (Global SIFI Buffer). The Agencies have stated their intent to finalize the Global SIFI Buffer by 2014 for phase in from 2016 to 2019.

As shown in *Appendix C*, The combination of the Capital Conservation Buffer, the Countercyclical Buffer and the Global SIFI Buffer could add as much as 7.5% to the minimum required common equity for Global SIFIs, potentially increasing the common equity tier 1 ratio to as high as 12% for Global SIFIs.

Capital Conservation Buffer

Consistent with the Basel III guidelines, the Fed has incorporated a capital conservation buffer based on the previous quarter end ratios whereby a banking organization’s common equity tier 1 capital ratio, tier 1 capital ratio and total capital ratios are calculated less the minimum requirement shown above for each ratio. To the extent that the result is less than 2.5% for any of the ratios, a capital conservation buffer would be implemented that would limit a banking organization’s ability to distribute its current quarter’s retained earnings through either capital distributions or discretionary executive pay according to the following schedule:

Capital Conservation Buffer	Max Payout % Retained Income
Greater than 2.5%	No limitation imposed
Less than or = 2.5% and Greater than 1.875%	Up to 60% of eligible retained income
Less than or = 1.875% and Greater than 1.25%	Up to 40% of eligible retained income
Less than or = 1.25% and Greater than .625%	Up to 20% of eligible retained income
Less than or = .625%	No distributions or discretionary bonus payments

The definition of capital distributions is very broad and includes: (i) tier 1 capital repurchases; (ii) tier 2 capital repurchases; (iii) tier 1 capital dividends; (iv) tier 2 capital dividends or payments; or (v) any similar transaction. Similarly, the definition of discretionary executive pay is very broad and includes discretionary payments made to any individual with major business line responsibility (regardless of title). The capital conservation buffer would phase-in between 2016 and 2018 with full implementation as of January 1, 2019. *Appendix D* illustrates these restrictions.

Regulatory Deductions and Adjustments to Common Equity Tier 1

The NPR adopts all of the Basel III deductions and adjustments to capital along with two additions – deductions for investments in hedge funds and private equity funds pursuant to DFA’s Volcker Rule and deductions for investments in unpermitted thrift holding company activities. Amounts deducted would also be excluded from the banking organization’s risk weighted assets and leverage exposure except for amounts of the threshold deduction items that are within the 10% or 15% limit and not deducted; these are risk weighted at 250%. Aside from goodwill, which is fully deductible in 2013, the other deductions and adjustments take effect beginning in 2014 through 2017, with full deduction in 2018. These deductions and adjustments are show in *Appendix E* and listed below:

- Goodwill and all other intangibles (excluding MSRs) net of associated deferred tax liabilities (DTLs)
- Deferred tax assets (DTAs) arising from NOLs and tax credit carryforwards net of valuation allowance and DTLs
- Mortgage servicing rights (MSRs) net of associated DTLs
- Significant investments in unconsolidated financial entity, i.e. the sum of all investments in common stock of unconsolidated financial entities where each investment exceeds 10% of the share capital of the target entity (see *Appendices F and G* for more details)
- Investment in capital instruments of financial entities beyond scope of regulatory consolidation (where the banking organization owns less than 10% of the common shares of each entity) and total holdings of capital instruments exceed 10% of the banking organization’s CET1; deduction would be applied against the same component of capital using the corresponding deduction approach (see *Appendices F and G* for more details)
- Excess of expected credit losses over loan loss provision (ARBs only)

- Defined benefit pension fund asset net of associated DTLs (if banking organization does not have unrestricted access to assets in liquidation)
- Unrealized gains and losses on all available-for-sale securities
- Unrealized gains and losses on cash flow hedges included in Accumulated Other Comprehensive Income that arise from hedging items that are not recognized at fair value on the balance sheet
- Cumulative gains and losses from changes in fair value of liabilities that arise from a change in the banking organization's own credit risk
- Gain on sale associated with securitization transactions
- Investments in activities by federal savings and loan association subsidiaries that are impermissible for national banks
- Investments exceeding 3% of tier 1 capital in hedge funds and private equity funds pursuant to Section 619 of the DFA

Among these deductions, DTAs, MSRs and significant investments in common stock of unconsolidated financial entity are individually subject to a limit of 10% of CET1 capital (prior to the deduction of any of these three items) and an aggregate basket of 15% of CET1 Capital (after giving effect to all deductions). Beginning January 1, 2018, amounts for these three items not deducted pursuant to the 15% threshold would be risk weighted at 250%.

Grandfathered Capital Phase-Out

The NPRs take a more conservative approach than Basel III to eliminate trust preferred securities (TPS) as a form of tier 1 capital. Contrary to the Collins Amendment that grandfathered tier 1 capital status for all bank holding companies with total assets less than \$15 billion as of December 31, 2009, the NPRs will begin amortizing down the tier 1 capital treatment of TPS over 10 years beginning in 2013 with full phaseout occurring on January 1, 2022 (excluding small bank holding companies with total assets of less than \$500 million at December 31, 2009). For banking organizations with \$15 billion or more in assets as of that date, the NPR amortizes the tier 1 capital treatment of TPS over three years beginning in 2013 with full phaseout occurring on January 1, 2016. As such, as shown in *Appendix H*, the NPR overrides the Collins Amendment of the DFA where the Basel III rules are more conservative and utilizes the Collins Amendment phaseout schedule for larger banks where it is more conservative.

The NPR explicitly encourages organic growth rather than growth through acquisition by requiring the three-year phaseout period of TPS for any banking organizations that would be greater than or equal to \$15 billion after giving effect to an acquisition, regardless of whether buyer or seller was below \$15 billion in assets before December 31, 2009. In contrast, banking organizations that grow organically to exceed \$15 billion in assets after December 31, 2009, would be grandfathered with a 10-year phaseout for TPS outstanding.

Unlike TPS, the NPRs are less conservative than Basel III by permanently grandfathering the tier 1 capital treatment of instruments issued to the U.S. Treasury under the Emergency Economic Stabilization Act (TARP, SBLF or CPP securities) while Basel III would require the phaseout over three years beginning in 2018.

Changes to Risk Weighting of Assets

While the numerator in the capital calculations for the NPRs is very similar to the original Basel III standards, the calculation of risk weighted assets in the denominator of the capital ratios has been changed to reflect the Fed’s view of the higher risk nature of certain types of loans including residential mortgages, pre-sold construction loans, and multifamily mortgages, high volatility commercial real estate loans, past due loans and selected other assets. Among these loan types, residential mortgages represent the largest asset category.

Residential mortgage loans unconditionally guaranteed by the U.S. Government or its agency would be 0% risk weighted and those conditionally guaranteed by the U.S. Government or a U.S. agency would be 20% risk weighted. Otherwise, residential exposures without U.S. government support would be divided into two categories based on their credit risk. Category 1 residential mortgage loans are current, fully documented loans with a 30 year or less stated maturity, underwritten to a fully indexed rate and a first lien position (or first and junior lien where both are held by the same party and the LTV criteria are met). Any exposure that is not a Category 1 loan or a restructured loan (other than through the HAMP program) would be viewed as Category 2 with a substantial difference in risk weighting noted in the chart.

LTV	Risk Weightings	
	Category 1 Residential Mortgage Exposure	Category 2 Residential Mortgage Exposure
Less than or equal to 60%	35%	100%
Greater than 60% and less than or equal to 80%	50%	100%
Greater than 80% and less than or equal to 90%	75%	150%
Greater than 90%	100%	200%

Pre-sold construction loans with a qualified purchase contract and statutory multifamily mortgages meeting prescribed payment history, LTV, amortization and interest payment criteria qualify for 50% risk weighting. Otherwise such loans would be 100% risk weighted. Acquisition, development and construction loan exposures are viewed as high volatility commercial real estate exposures (HVCRE) that require 150% risk weighting unless the loan finances 1-to-4 single-family residential property or low LTV commercial real estate, and the borrower has contributed cash or equivalents of at least 15% of the appraised completed value. All loans 90 days or more past due or on nonaccrual status (and not guaranteed or secured by a residential mortgage) would have a risk weighting of 150%.

Other risk weightings include 0% for cash and investments in gold; 20% for items in process of collection; 100% for DTAs through NOLs carrybacks; and 250% for MSRs and DTAs from temporary differences that could not be used through carryback and are not deducted from common equity tier 1 capital as discussed above.

The exposure amount of off-balance sheet items would generally be calculated by multiplying the off-balance sheet notional amount by the credit conversion factor (CCF). For unconditionally cancellable exposures, the CCF would be 0%. For commitments that are not unconditionally cancellable, the CCF would be 20% for exposures with an original maturity of one year or less and 50% for exposures with an original maturity of one year or more for contingent items such as performance bonds. Off-balance sheet guarantees, repurchase agreements, securities lending or borrowing transactions and standby letters of credit would have a 100% risk weighting.

For investments in MBS, ABS and structured securities, the NPRs propose major changes in risk weighting as banking organizations can no longer rely on outside credit ratings to determine the appropriate risk weighting. With these transactions, the banking organization must deduct the non-cash, after-tax gain on sale of the securitization, apply 1,250% risk weighting to investments in credit-enhancing IO strips, 100% risk weighting for non-credit enhancing IO strips, and either use the gross up method (described below) or the simplified supervisory formula approach (SSFA) method to risk weight investments. Under the gross up method, investments in the senior secured tranches are assigned the risk weighting associated with the underlying exposures. With respect to subordinate tranches, a banking organization must hold capital for the subordinate tranche as well as the senior tranche for which the subordinate tranche provides credit support. A banking organization may also use the SSFA that calculates the weighted average risk weighting of the underlying exposures adjusted for the attachment and detachment points of the particular securitization positions and the delinquencies within the underlying collateral. Either of these approaches would require a banking organization to prepare detailed spreadsheet analysis to track their investments and is expected to introduce significant administrative burden in addition to higher capital requirements. That combination could have a negative impact on the securitization market.

Revised Prompt Corrective Framework

The NPRs propose revised Prompt Corrective Action (PCA) requirements that will take effect on January 15, 2015 and have been updated to reflect the proposed changes to the definitions of capital and regulatory minimum capital ratios. It is important to note that the 2.5% capital conservation buffer is not directly incorporated into the PCA framework as had been expected. Instead, the well-capitalized PCA levels are set 0.5% below the fully phased-in requirements for common equity tier 1 capital, tier 1 capital, and total capital ratios. As such, the fully phased-in Basel III ratios set a slightly higher bar for banking organizations to be considered well-capitalized than is required under the PCA framework. However, the U.S. requirement for a 5% leverage ratio to be considered well-capitalized is substantially higher than the 3% leverage ratio requirement for Basel III.

	<u>Well Capitalized</u>	<u>Adequately Capitalized</u>	<u>Under- Capitalized</u>	<u>Significantly Under- Capitalized</u>	<u>Critically Under- Capitalized</u>
Common Equity Tier 1 Capital Ratio	> or = 6.5%	> or = 4.5%	< 4.5%	< 3 %	TE/TA < or = 2%
Tier 1 Capital Ratio	> or = 8%	> or = 6%	< 6 %	< 4 %	
Total Capital Ratio	> or = 10%	> or = 8%	< 8 %	< 6 %	
Leverage Ratio	> or = 5 %	> or = 4 %	< 4 %	< 3 %	
Supplemental Leverage Ratio (ARBs)	N/A	> or = 3 %	< 3 %	N/A	N/A

While the PCA capital levels describe specific capital levels, they do not explicitly account for the quality of individual asset portfolios or the other types of risk such as interest rate, liquidity, market or operations risk to which banking organizations may be exposed. For this reason, Section 10(d) of the Capital Rules NPR requires a banking organization to maintain capital commensurate with the level and nature of all risk to which it is exposed and that a banking organization have a process for assessing its overall capital adequacy relative to its risk. In this way, all banking organizations will be expected to keep sufficient capital for the risk in their portfolio, which may exceed the levels otherwise required. In other words, among other things, *if the results from an individual banking organization's stress tests show it would fall below required capital levels during stress scenarios, it could be required to maintain additional capital commensurate with the risk in its portfolio even if that requires capital levels above the levels otherwise required to be well capitalized.*

Requirement for Gone–Concern Capital Treatment Disclosure

In order for non–common capital instruments to be included in (tier 1 and total) regulatory capital, such instruments must have explicit language stating that the instrument is available to fully absorb losses in the event of non–viability of the financial institution. U.S. regulatory agencies believe that U.S. law is generally consistent with this standard as the FDIC has the statutory authority to place failing financial institutions into receivership. The NPRs note that consistent with the Basel III non–viability standard, additional tier 1 and tier 2 capital instruments issued by banking institutions would be required to provide disclosure that the holders of the instruments may be fully subordinated to the interests held by the U.S. government in the event of insolvency.

Potential for REIT Preferred and Other Hybrid Capital Instruments

While TPS will be phased out as a form of tier 1 capital, the NPRs reconfirm the viability of REIT preferred as an acceptable form of tier 1 capital, subject to the minority interest limitations. The REIT preferred must be perpetual and have potential to be converted into non-cumulative perpetual preferred stock of the banking organization if it became undercapitalized. The REIT subsidiary must qualify as an operating entity and must have the ability to declare a consent dividend (i.e. provide prior approval of nonpayment of a dividend under certain circumstances) to maintain its REIT status during a period when cash dividend payments are suspended. The amount of REIT preferred that may count as common equity tier 1 capital, tier 1 capital, or total capital is a function of the percentage of the REIT's subsidiary preferred stock not owned by the bank and the amount of capital the subsidiary would have to hold to avoid any restrictions on capital distributions or discretionary bonus payments under the capital conservation buffer. In our view, this calculation is unduly complex to be of practical benefit for most banks that would consider issuing REIT preferred or other minority interest capital, and will need to be clarified during the comment period.

Key Implications

- **BROAD APPLICATION:** All insured depository institutions and bank and thrift holding companies (except BHCs with total assets less than \$500 million), will face increased capital requirements beginning in 2013 and fully phased-in by 2019. This broad application essentially levels the playing field on charter differences between banks and savings and loans, etc.
- **COMPLEX CAPITAL CALCULATIONS:** All insured depositories will face the administrative burden of tracking 13 categories of deductions and adjustments to capital and changes to risk weighted assets on a quarterly basis to demonstrate compliance with three minimum capital requirements, plus the capital conservation buffer, to avoid restrictions on capital distributions and discretionary payouts. All banking organizations with TPS outstanding as of May 19, 2010 will face a phase out of tier 1 capital treatment for such TPS. Banking organizations with total assets less than \$15 billion at December 31, 2009, will face a 10-year amortization from 2013 through 2021, while banking organizations with total assets equal to or greater than \$15 billion would face a three-year amortization from 2013 through 2015.
- **POTENTIAL VOLATILITY OF REGULATORY CAPITAL:** Certain adjustments to regulatory capital calculations, such as inclusion of unrealized gains and losses on AFS securities and exclusion of some gains and losses from cash flow hedges, along with changes in risk weighting of loans and securities based on credit performance, have the potential to introduce substantial volatility in the capital account during periods of rising interest rates or deteriorating credit quality. The regulatory agencies acknowledge their concern about this volatility by inserting four requests for comments (Questions Nos. 15, 16, 28 and 29 in the Capital Rules NPR). Changes in credit performance of loans will cause volatility in the capital calculations of banking organizations as loans that are nonperforming or more than 90 days past due will now be risk weighted at 150%. Banking organizations will also face greater volatility in their regulatory capital calculations in a rising interest rate environment due to the adjustment to CET1 for unrealized gains and losses on AFS securities as well as the adjustment to tier 1 common for gains and losses on some cash flow hedges. For example, in order to at least partially

offset the impact of rising rates on equity capital due to declining market values of AFS securities, many banks have historically used swaps as a cash flow hedge of floating rate or short-term rollover funding to “fix” their funding costs. Based on the new NPRs, the gains from a cash flow hedge on the term liability would be excluded from CET1 while the losses on debt investments held in available for sale (AFS) would be included in both GAAP and CET1. With interest rates near historic lows, this double whammy could cause significant volatility in the CET1 capital of banking organizations.

To put this issue into perspective, Sandler O’Neill’s Balance Sheet Analytics Group reviewed the potential exposure on the available for-sale investment portfolio that over 7,000 banking organizations with total assets less than \$50 billion would face with a sudden increase in interest rates of 300 basis points. *Appendix I shows that these institutions could potentially lose almost \$75 billion of common equity tier 1 capital or about 3% of their collective CET1 capital. Similarly, Appendix J notes that these institutions could potentially lose \$2 billion to \$18 billion if gains from cash flow hedges were excluded from CET1.*

- REALLOCATION OF CAPITAL AND REPRICING OF RISK: Certain business lines and asset types are subject to capital deductions or increases in risk weighting. Bank management must evaluate the allocation of capital and repricing of risk to the business lines that offer the best returns on risk-weighted capital after giving effect to these adjustments. For example, with the deduction of mortgage servicing rights from tangible common equity (>10%) and the increase in risk weighting for high LTV residential mortgage loans, the financial model for residential lending may need to be rethought.
- HIGHER COST OF CAPITAL: The increase in tangible common equity as a percentage of tier 1 capital improves the quality and quantity of capital but also raises the effective cost of regulatory capital. Suggestions that higher capital levels will reduce investor requirements for targeted returns are unproven and the higher volatility associated with the quarterly capital calculations may actually offset or raise investor requirements for returns given the uncertainty about whether dividends can be paid with the dividend stopper provisions of the capital conservation buffer that is part of Basel III.
- IMPACT ON ASSET SECURITIZATION WITH INVESTMENTS COMPLICATED BY NON-RELIANCE ON RATINGS: Banking organizations will no longer be allowed to rely on credit ratings to determine the permissibility of and risk weighting for investment in securitized assets. Banking organizations using the standardized approach for risk weighting assets will be required to rely on either the gross up method or the SSFA method to determine the risk weighting for securitization investments. For investment in subordinate tranches of securitization transactions, the gross up method requires that capital be allocated against the senior tranche supported by the subordinate tranche. The SSFA method requires that capital be allocated based on the underlying exposures of the collateral adjusted for the attachment and detachment points of the particular securitization positions and the delinquencies within the underlying collateral. These methodologies result in a cumulative risk weighting of the securitized assets that exceeds the risk weighting for the underlying collateral. The quarterly tracking of these investments required by Basel III will likely add significant administrative burden and will likely have a negative impact on the asset securitization market.

- REIT PREFERRED AND OTHER FORMS OF MINORITY INTEREST CAPITAL MAY BECOME MORE POPULAR: Bank level issuance of REIT preferred and similar minority interest instruments may become attractive forms of hybrid capital subject to certain limitations. For this form of capital to be of benefit to most banks, there will need to be greater clarity for the calculation of the permitted amount through the comment process.

The Basel III capital rules are largely consistent with the guidelines ratified by the G20 countries in late 2010. Where there are differences with existing U.S. rules, the agencies have largely opted for more conservative provisions. By having the rules apply to all insured depository institutions, the agencies have leveled the playing field among various types of charters. The complexity of calculating and tracking the capital calculations will no doubt add to the administrative burden for smaller banking organizations implementing these rules. The deductions/adjustments to regulatory capital combined with higher risk weighting assigned to certain types of lending will cause a reallocation of capital and repricing of risk. All banks will face a higher cost of capital as a result of the increase in required tangible common equity as a percentage of tier 1 capital. The DFA requirement for non-reliance on credit ratings will certainly complicate investments. While these challenges appear daunting, assuming the Basel III rules are enforced equally around the world, U.S. banks should continue to prosper with our more efficient and transparent capital markets, access to information technology for tracking risk, and close coordination among the regulatory agencies to manage the review process efficiently. But these challenges will force continued consolidation among mid-size and smaller banks in the U.S. ***Those bank management teams and Boards of Directors that are aggressive in reallocating capital and repricing risk in this new environment will position their franchises to emerge as survivors while the banking industry continues to consolidate.***

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Mr. Killian holds a Bachelor of Science from the University of North Carolina at Chapel Hill, where he was a John Motley Morehead Merit Scholar, and a Masters in Business Administration from Northwestern University's J.L. Kellogg Graduate School of Management. He is a frequent speaker at industry and regulatory conferences on issues affecting financial institutions and capital markets, and his articles have appeared in *Bank Accounting & Finance*, *U.S. Banker*, and *Modern Bankers*, a publication of the Peoples Bank of China.

Appendix – A

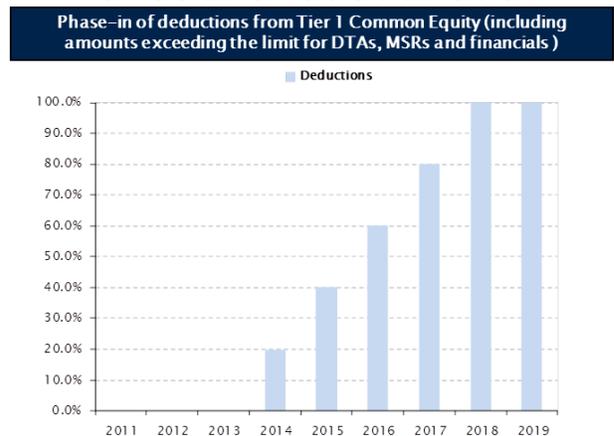
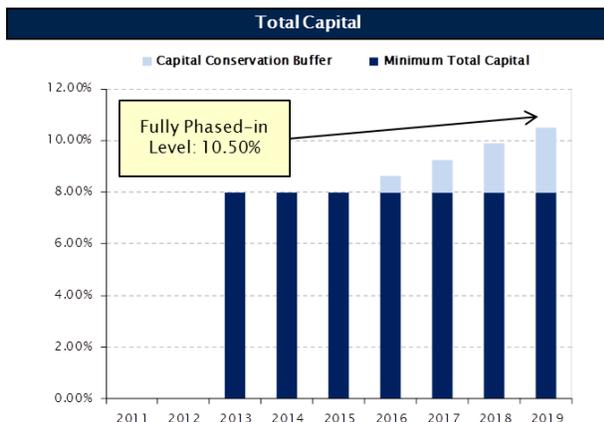
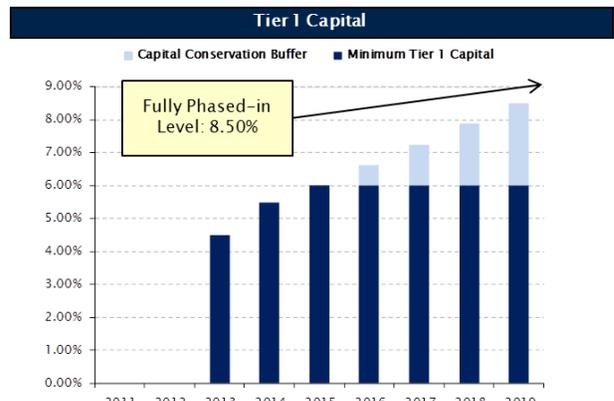
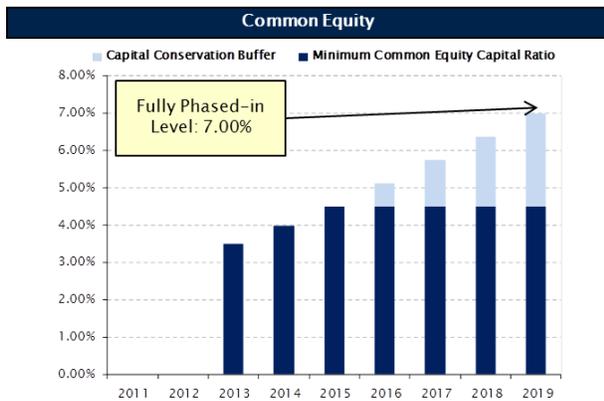
Basel III Capital Ratios Ratified by G20 Countries in December 2010

Following a 90-day comment period, the capital rules become legally binding as of January 1, 2013

Capital		Fully Phased-in Ratio
Tier 1 Leverage / Average Assets Ratio	= $\frac{\text{CET1} + \text{Additional Tier 1 Capital} - \text{Regulatory Adjustments}}{\text{Average On-Balance Sheet Assets}}$	4.00%
Common Equity / Risk-Weighted Assets Ratio	= $\frac{\text{CET1} - \text{Regulatory Adjustments}}{\text{Risk-Weighted Assets}}$	7.00%
Tier 1 Leverage / Risk-Weighted Assets Ratio	= $\frac{\text{CET1} + \text{Additional Tier 1 Capital} - \text{Regulatory Adjustments}}{\text{Risk-Weighted Assets}}$	8.50%
Total Capital / Risk-Weighted Assets Ratio	= $\frac{\text{CET1} + \text{Additional Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk-Weighted Assets}}$	10.50%
Supplementary Leverage Ratio <i>(Advanced Approach Investments Only)</i>	= $\frac{\text{CET1} + \text{Additional Tier 1 Capital} + \text{Tier 2 Capital} - \text{Regulatory Adjustments}}{\text{Accounting Measure of Expense} + \text{Off-Balance Sheet Items} - \text{Regulatory Adjustments}}$	3.00%

Appendix – B

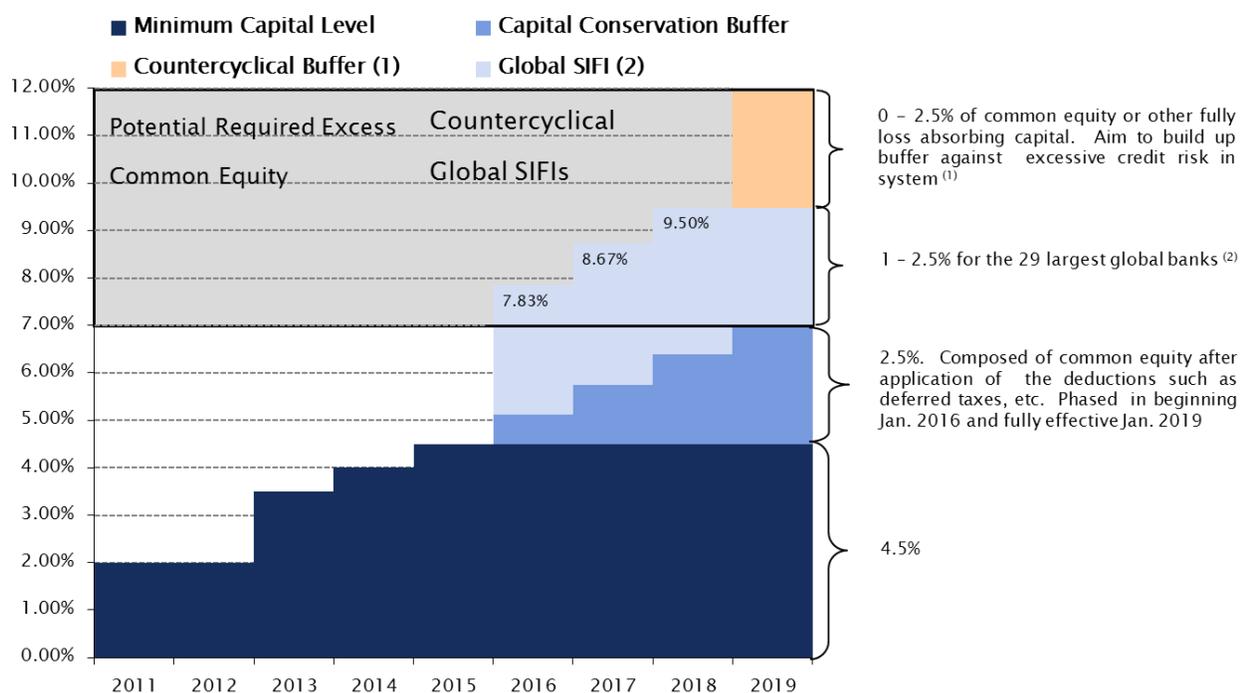
Basel III Capital Requirements fully phased-in as of January 1, 2019



Appendix - C

Common Equity Tier 1 Ratio Could Be as High as 12% for Global SIFIs

Excluding any potential counter cyclical buffer, the global SIFI Buffer could increase CET1 requirements



⁽¹⁾ Countercyclical capital buffer would require additional capital to protect against losses during periods when private sector credit is growing faster than GDP. The required buffer would be determined in three steps: (i) calculating the ratio of aggregate private sector credit to GDP, (ii) calculating the gap between such ratio and its historical trends and (iii) translating that gap into a minimum Tier 1 capital buffer add-on.

⁽²⁾ Global Systemically Important Financial Institutions buffer ranges from 1.0 to 2.5% depending on risk profile with potential to increase to 3.5% phased in over 3 years beginning January 1, 2016.

Appendix - D

Capital Ratios Must Meet Targets to Avoid Restrictions on Capital Distributions and Discretionary Payouts

Based on fully phased-in capital levels effective January 1, 2019

Total Capital	Tier 1 Capital	Common Equity Tier 1 Ratio	Capital Conservation Buffer	Max Payout %
8.000% to 8.625%	6.000% to 6.625%	4.500% to 5.125%	Less than or = .625%	0%
8.625% to 9.250%	6.625% to 7.250%	5.125% to 5.750%	Less than or = 1.250% and greater than .625%	20%
> 9.250% to 9.875%	> 7.250% to 7.875%	> 5.375% to 6.375%	Less than or = 1.875%	40%
> 9.875% to 10.500%	> 7.875% to 8.500%	> 6.375% to 7.000%	Less than or = 2.50% and greater than 1.875%	60%
> 10.500%	> 8.500%	> 7.000%	Greater than 2.5%	100%

Appendix – E

Capital Ratio Compliance Complicated by Deductions and Phase-Out Periods



(1) Our preliminary understanding is that this forward loan loss provisioning only applies to internationally active banks adopting the IRB approach to provisioning.

Appendix – F

Deductions for Investments in Capital Instruments Issued by Other Financial Institutions Could Have a Significant Impact on Capital Ratios

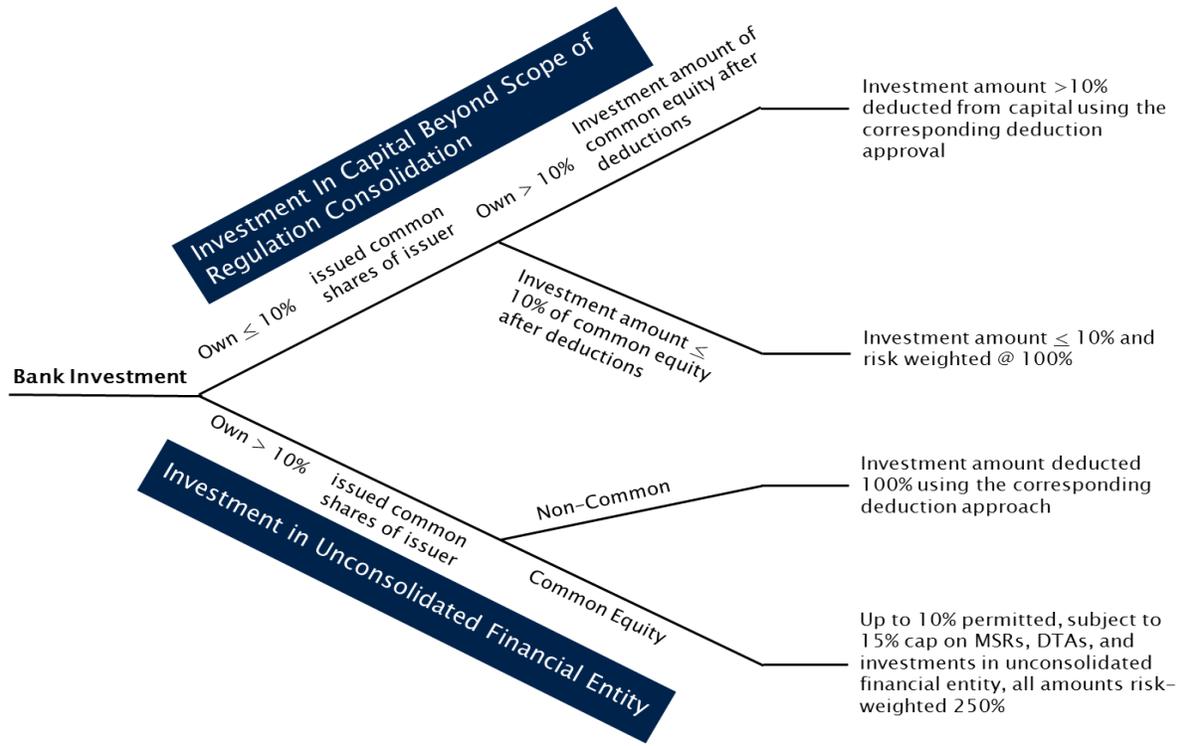
- ❑ For banks owning **LESS THAN 10%** of an issuer's issued common shares:
 - For all investments of **MORE THAN 10%** of the investing bank's common equity (after standard deductions) in capital instruments of other unconsolidated financial entity outside the regulatory scope of consolidation, the investing bank will be required to deduct from capital the amount in excess of 10% using the corresponding deduction approach summarized below
 - For all investments of **LESS THAN 10%** of the investing bank's common equity (after standard deductions) in capital instruments of other unconsolidated financial entity, the investing bank will be required to risk weight the amount of such investment using the schedule of risk weighted assets
- ❑ For banks owning **MORE THAN 10%** of an issuer's issued common shares:
 - For all investments in non-common capital instruments, such investments are deducted 100% using the corresponding deduction approach highlighted above
 - For all common equity investments, a bank is permitted to invest up to 10% of its common equity in the common equity of another financial entity with that investment subject to 250% risk-weighting. Any investment in unconsolidated financial entity in excess of 10% of the investing bank's common equity (after standard deductions) will be deducted from the investing bank's common equity, and beginning January 1, 2013, will also be subject to a 15% aggregate limit for a basket including deferred tax assets, mortgage servicing rights and this investment in unconsolidated financial entity
- ❑ Corresponding Deduction Approach:

Investments in excess of 10% are fully deducted using the corresponding deduction approach for the same component of capital. If a bank does not have enough of that form of capital then the shortfall would be deducted from the next higher tier of capital

- | | | | |
|------|----------------|---|---|
| I. | Total holdings | x | Common equity holdings / total capital holdings |
| II. | Total holdings | x | Additional Tier 1 capital holdings / total capital holdings |
| III. | Total holdings | x | Tier 2 capital holdings / total capital holdings |

Appendix - G

Deductions for Investments in Capital Instruments Issued by Other Financial Institutions Could Have a Significant Impact on Capital Ratios



Appendix - H

Capital Ratio Compliance Complicated by Capital Phase-Out Periods



⁽¹⁾ Excludes small banking holding companies < \$500 million in assets at 12/31/09.

⁽²⁾ Including instruments that no longer qualify due to "gone-concern" capital phase out.

Appendix - I

Deductions for Unrealized Gains and Losses Could Significantly Impact Capital Ratios In a Rising Interest Rate Environment

- ❑ Currently, unrealized gains and losses of AFS securities are EXCLUDED from regulatory capital, but INCLUDED in GAAP and tangible equity
- ❑ However, under Basel III, unrealized gains and losses would now be included in CET1
- ❑ We can readily measure the potential impact of this rule on bank capital ratios if interest rates rise:

Asset Size	Total Number of Banks	Total Assets	Total Risk-Weighted Assets	Total AFS Securities	Total Tier 1 Common Equity	Tier1 Common Equity Ratio	Change in MV of Securities +300	+300 Tier 1 Common Equity	+300 Tier 1 Common Equity Ratio	Change in Tier 1 Common Equity Ratio
\$15 billion - \$50 billion	28	758,061,259	503,292,556	129,797,098	61,540,429	12.2%	(13,628,695)	47,911,734	9.5%	-2.7%
\$10 billion - \$15 billion	27	338,907,132	216,887,606	73,169,159	32,171,022	14.8%	(7,682,762)	24,488,260	11.3%	-3.5%
\$500 million - \$10 billion	1,181	1,803,660,765	1,206,645,226	344,915,689	155,816,335	12.9%	(36,216,147)	119,600,188	9.9%	-3.0%
< \$500 million	5,767	875,182,864	577,738,399	168,048,296	88,715,908	15.4%	(17,645,071)	71,070,837	12.3%	-3.1%
Total	7,003	3,775,812,020	2,504,563,787	715,930,242	338,243,694	13.5%	(75,172,675)	263,071,019	10.5%	-3.0%

- ❑ We assume a duration of 3.5 years for the AFS securities portfolio, based on empirical evidence
- ❑ Using this assumption, the aggregate CET1 Ratio for all banks less than \$50 billion in assets would decline by 3% if interest rates rise 300bp – not unlikely given that we are at historic lows in rates

Appendix - I

Deductions for Unrealized Gains on Cash Flow Hedges Could Significantly Impact Capital Ratios In a Rising Interest Rate Environment

- ❑ Many banks use cash flow hedges to hedge short-duration liabilities as part of their overall interest rate risk management approach
- ❑ These hedges are often designed to provide protection to Tangible Equity from the negative impact of higher rates on the AFS bond portfolio
- ❑ Banks designate these hedges as cash flow hedges of liabilities, rather than fair value hedges of assets, because the accounting application is more straight forward and produces significantly less earnings volatility
- ❑ Using Fair Value accounting on the hedged item is not a practical solution because it simply introduces credit spread volatility into the income statement
- ❑ Important to note that in a cash flow hedge of the interest rate risk in a short-duration liability, there IS no offsetting “hidden” gain or loss in the hedged item – changes in market interest rates do not impact the fair value of a short liability
- ❑ Backing out the cash flow hedge reserve would remove one of the most easily implemented ways for banks to protect CET1 from interest-rate related losses on the bond portfolio
- ❑ We expect to see less cash-flow hedging as a result of this rule, which could lead to more interest rate risk in the banking system

“Backing Out” the unrealized gains on cash flow hedges could reduce Common Equity Tier 1 among banks below \$50 billion by between \$1.5 billion and \$17.5 billion, depending on the proportion of the \$97 billion of outstanding hedging derivatives which are cash flow hedges versus fair value hedges, and their duration. (There is insufficient granularity in the public data available to be more precise)

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