A More Prominent Role For
The Leverage Ratio In The Capital Framework
Remarks by
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Introduction

As the banking industry emerges from the 2008 financial crisis, there is no question that it caused great strain on banks of all sizes. Hundreds of community banks failed, and the largest institutions were unable to continue operating without massive, unprecedented government intervention. This region in particular experienced the full impact of the crisis and the stress it placed on small institutions. A key ingredient in the market disruption was inadequate capital protection. Looking forward, it is important that the regulatory community arrive at a capital framework that is appropriate for the range and complexity of risks in today's financial system.

As someone who served on the Treasury Department's crisis response team in 2008, it became clear that the market was punishing firms and business models that took on too much risk without sufficient capitalization. Yet, upon returning recently to government service I have been surprised at what I see as a lack of progress towards constraining excessive leverage[1]. Some policymakers point to advancements in the Basel III agreement, developed by the Basel Committee on Banking Supervision, which implements a global leverage ratio for the first time. However, I think that it is difficult to argue that achieving a Tier 1 leverage ratio of three percent by 2018 is significant reform, particularly as this leverage ratio requirement is not solely anchored in tangible common equity[2].

Consequences of Insufficient Capital

The immediate consequences of the crisis support the notion that banks had insufficient capital protection under the pre-crisis capital framework, which relied heavily on risk-weighted assets (RWAs). This insufficient capital protection led to unprecedented government support of the banking system as an attempt to minimize significant disruption to the real economy. The magnitude of direct and indirect support to firms masks the true levels of capital that would have been needed in aggregate to prevent widespread distress to the financial system. As a starting point, the gravity of the actual consequences cannot be appreciated fully without acknowledging the decision by the Federal Housing Finance Agency (FHFA) and the Treasury Department to place Fannie Mae and Freddie Mac into a government-financed conservatorship run by FHFA. The two entities possessed approximately $1.7 trillion in unsecured debt and another $3.5 trillion in mortgage guarantees on their balance sheets, obligations to which many financial institutions were counterparties[3]. Absent such intervention, the losses in the banking system would have been far more systemic and substantial.

Additionally, the Federal Reserve Board and the Treasury Department established several programs to provide emergency liquidity, capital, and other assistance to support banks, insurers, specialty finance companies, and automotive companies. These programs include but are not limited to:

- The Capital Purchase Program implemented as part of the Troubled Asset Relief Program, through which the Treasury purchased approximately $200 billion in preferred stock from U.S. financial institutions;
- The Federal Reserve's zero interest rate policy (ZIRP);
- The Federal Reserve's Primary Dealer Credit Facility, which provided almost $9 trillion in needed liquidity to these institutions;
- The Term Asset-Backed Securities Loan Facility, under which the Federal Reserve lent to banks and funds to support asset-backed securities issuance to stabilize credit card, student loan, and auto lending markets;
- The Federal Reserve's Term Securities Lending Facility aimed at promoting liquidity in Treasury and other collateral markets; and
- The Federal Reserve's Commercial Paper Funding Facility.

The unprecedented government intervention supports the notion that in this crisis, the markets rejected the existing Basel risk-based capital measurements in determining a bank's likelihood of default. Because financial institutions lacked adequate capital protection, their funding demands increased sharply just as their access to funding eroded. The magnitude of this many liquidity, capital, and emergency assistance facilities for banks -- as well as for broker-dealers and other nonbanks -- illustrates the market's eventual penalization of banks that had not maintained sufficient levels of quality capital to protect against on- and off-balance sheet risk.

Gaps in the Capital Framework

We are now approaching five years since the start of the crisis, and it is reasonable for the public to expect that policymakers have addressed the causes of the crisis. It is true that much work coming out of the regulatory agencies remains to be done[4]. Even at this stage, however, important gaps in the regulatory framework are beginning to emerge, including the lack of attention to raising sufficiently both the quality and quantity of capital in U.S. banks.

Since the inception of the first Basel capital accords in 1988, the Basel Committee has weighted bank assets by category according to perceived risk to try to measure more precisely and accurately the riskiness of a bank's assets and prescribe capital requirements accordingly. For example, current risk weightings imply that mortgage-backed securities possess significantly less risk than corporate debt and therefore would require a lower level of capital protection. However, the recent crisis revealed that the mortgage market does not necessarily warrant this lower risk designation. Today, some raise a similar concern about the sovereign debt of many developed economies, notwithstanding the zero risk weighting applied to many OECD nations' debt under the current Basel III proposal. While the Basel capital ratios based on RWAs do have a role

in the capital framework for U.S. banks, weaknesses inherent in risk weightings make it insufficient to place such heavy reliance on risk-weighted ratios in capital regulation.

The Case for a Leverage Ratio

First, with the benefit of hindsight, the case for focusing on a leverage ratio to measure actual capital is building. There is growing empirical evidence that a leverage ratio based on total assets is a better predictor of bank distress than a risk-based capital ratio. Recently, OECD economists, studying 94 banks between 2004 and 2011, have shown that the Basel Tier 1 risk-based capital ratio is not a statistically significant indicator of bank default; however, the leverage ratio is very statistically significant[5]. Other policymakers and researchers have come to similar conclusions. For example, Andrew Haldane, the Executive Director for Financial Stability at the Bank of England, has arrived at results similar to those of the OECD[6]. A leverage ratio forces banks to account for all assets, even those assets assigned low risk weights in the Basel system. While the Basel Committee has worked to refine risk-weighted measurements over the years, the recent banking crisis should remind regulatory authorities that risk weightings, which parallel traditional loss rates on asset classes, are not necessarily a reliable predictor of future default.

A second potential issue raised by the Basel RWA methodology lies in its complexity, which provides banks with the opportunity to manage RWAs to reduce capital requirements. In doing so, banks may concentrate their balance sheets in certain asset classes that, in aggregate, may expose the institution to more risk than the lower risk weightings would imply. This was the case with respect to many banks' holdings of GSE obligations leading up to the financial crisis. Indeed, banks appear to be increasing their Basel capital levels with a focus on RWA optimization rather than a renewed emphasis on building retained earnings or raising equity financing. In fact, recent OECD research shows that global banks have been using internal optimization models to manage RWAs in a manner that allows banks to meet higher risk-weighted capital requirements with modest increases in common equity[7]. According to the research, several European banks have been financed by relatively low levels of common equity, despite reporting very high Tier 1 risk-based capital ratios. As an example, Dexia, a major financial institution nationalized as a result of the European sovereign debt crisis, had a total net equity position of negative €320 million in December 2011 despite having Tier 1 and core Tier 1 risk-weighted capital ratios of 7.6 percent and 6.4 percent respectively[8]. A cursory review of investor presentations suggests that many U.S. banks also have undertaken pronounced management of RWAs. The recent improvements in capital adequacy as measured by risk-based capital ratios might be more apparent than real if they do not reflect a true reduction in leverage. Despite their sophistication, the models used to measure RWAs may not produce sufficiently accurate measures of capital adequacy.

Third, complexity and lack of transparency inhibit market discipline. This sentiment was expressed recently by Andrew Bailey, head of supervision at the United Kingdom's Financial Services Authority, who stated in testimony that investors have "lost confidence" in the calculation of RWAs, and "they don't understand it."[9] The notion that

investors do not understand risk weightings is supported by market research. A recent survey of 130 bank investors at more than 100 institutions suggested that they do not trust RWAs and the Internal Ratings Based model adopted as part of the Basel agreement for the largest banks to do their own modeling of RWAs[10]. Research also indicates that it is more difficult for investors to make comparisons of the riskiness of a bank's assets, even within specific asset classes.[11] This lack of transparency could reduce the efficiency of banking markets and lead investors to become overly reliant on regulatory exercises and judgment. I am concerned that the marketplace is becoming too reliant on the signaling from the results of regulatory stress tests as opposed to proper investor due diligence. If fewer investors are able to understand and analyze banks' capital protection relative to balance sheet risks, markets will become less efficient and market discipline will erode. Further, there is the persistent danger that the complexity of Basel capital models will prevent regulatory authorities, who have an even a greater level of access to company information, from using Basel capital measurements to arrive at an accurate assessment of a bank's capital adequacy.

The Results Indicate Variation in Risk Weightings

Recent research from the Basel Committee itself confirms the presence of these two effects of risk weightings. Last week, the Basel Committee released a report detailing the findings to date of its Regulatory Consistency Assessment Program (RCAP). The committee overseeing the RCAP seeks to ensure that the Basel framework is implemented consistently on a global basis because doing so "is fundamental to raising the resilience of the global banking system, maintaining market confidence in regulatory ratios and providing a level playing field for internationally operating banks."[12] To evaluate consistency, the committee analyzed publicly available data of large globally active banks with significant trading operations and conducted a hypothetical portfolio exercise to examine what drives variation in banks' internal market risk models, and thus RWAs. In previewing the results of this report, Stefan Ingves, the Chairman of the Basel Committee made three important points:

1. There is a material variation in risk weights for trading assets across banks (after adjusting for accounting differences and for differences in the riskiness of different bank portfolios);
2. Certain modeling choices seem to be major drivers of the variation in risk weights; and
3. The quality of existing public disclosure is generally insufficient to allow users to determine how much of the variation in reported risk weights is a reflection of underlying risk taking, and how much stems from other factors (e.g., modeling choices, supervisory discretions).[13]

In total, these observations suggest that a leverage ratio requirement anchored in tangible common equity is worthy of a far more prominent place in the regulatory capital framework. Excessive leverage was identified by key global financial regulators as a cause of the financial crisis as it was unfolding.[14] In fact, many prominent global policy leaders have expressed concerns about the inadequate levels of capital in the financial system and have focused their attention on the leverage ratio. Former Federal Reserve

Board Chairman Paul Volcker stated in his comment letter regarding Basel III, "the relative simplicity and effectiveness of a really adequate leverage ratio at a meaningful level is critically important."[15] In a Basel III comment letter submitted on behalf of the Systemic Risk Council, former FDIC Chairman Sheila Bair wrote, "[e]xtensive research conducted on banks that became troubled during the crisis demonstrated that an institution's leverage ratio is a much better predictor of financial health than its risk-based ratio," and she then proposed an 8 percent minimum leverage ratio.[16] Even more recently, Andrew Haldane said in testimony that there are "analytically coherent reasons" for thinking that the 4 percent leverage ratio proposed by the Vickers Commission for U.K. ring-fenced banks "…may be somewhat on the low side…"[17]

A New and Enhanced Minimum Leverage Ratio

Faced with these reminders of the importance of maintaining strong capital protection, I believe the regulatory agencies should consider establishing higher minimum leverage ratios based on high-quality tangible capital relative to a bank's total assets. It is hard to dispute that the financial system and the real economy would be much better off today had banks been financed by higher levels of real equity back in 2008. Regulators should evaluate the shortcomings of a risk-weighted assets regime and consider a more balanced approach to capital regulation. While global cooperation in financial regulation is important, I believe U.S. regulators should take the lead in supporting a strong leverage ratio. A better capitalized banking system will promote U.S. economic growth.

The rules that the banking regulators have proposed to implement Basel III possess two distinct elements that directly address leverage.[18] First, the rules maintain the longstanding leverage ratio requirements contained in the agencies' Prompt Corrective Action regulations. For an insured bank, the minimum required leverage ratio is 4 percent, and the ratio needed to be well-capitalized is 5 percent. These leverage ratios are calculated using a new definition of Tier 1 capital as the numerator and adjusted average total assets as the denominator.[19] Second, for the largest financial institutions subject to the Advanced Approaches rulemaking, the agencies have proposed that institutions must satisfy a supplemental leverage ratio of 3 percent, which would be calculated using the new definition of Tier 1 capital in the numerator and a combination of both on-balance sheet and off-balance sheet exposures in the denominator.

I believe that banking regulators should propose for comments a rule that considers whether to require banks to meet a minimum ratio of tangible common equity to non-risk-weighted assets that is higher than the Tier 1 leverage ratio and supplemental leverage ratio being proposed in the Basel NPRs. Additionally, there are compelling reasons to revisit accounting standards for derivatives and repurchase agreements that call for netting of these significant positions. A more robust leverage ratio would calculate these positions on a gross basis to capture the magnitude of these risks, which may not be reflected properly when accounted for on a net basis.

I have discussed some of the reasons why I believe the regulatory agencies should invite comment on establishing a higher leverage ratio requirement than currently proposed. I think an equally important element of such a proposal is that the leverage

ratio must be anchored in tangible common equity, which is a stronger form of capital than the Tier 1 ratio proposed in Basel III. The Basel Committee has explained the importance of tangible common equity as a measure of a bank's ability to absorb losses by stating, "the crisis demonstrated that credit losses and writedowns come out of retained earnings, which is part of banks' tangible common equity base."[20] The Basel Committee acknowledged that leading up to the financial crisis, "it has been possible for some banks under the current standard to display strong Tier 1 ratios with limited tangible common equity." [21]

A modernized leverage ratio requirement would work alongside the Basel risk-based capital approach. While I have noted many shortcomings of the current risk-weighting framework, I believe that risk-weighted capital measurements can provide useful insights into banks' asset structures and lending and investment trends over time. Absent risk weights, it could be argued that banks would be incentivized to carry a greater portion of high-risk assets on their balance sheets to earn higher yields for the same cost of capital as low-risk, lower yielding assets.

I recognize that if the U.S. were to implement a considerably higher leverage ratio anchored in tangible common equity, other countries may not follow. Thus, the effects of imposing a leverage ratio on the global competitiveness of U.S. banks should be reviewed and considered carefully. The regulatory agencies should propose a leverage rule and allow commenters to present all sides of the issues so that the regulatory community can make thoughtful and reasoned decisions.

Conclusion

A more robust capital regime does not solve nor prevent all challenges in the financial system. Supervision, risk management, structural considerations, resolvability, and other economic policy considerations are also critically important factors in promoting economic growth. The regulatory community should recall accurately the magnitude and depth of the 2008 crisis, which made it clear that banks, particularly globally active ones, needed higher levels of capital. In my view, the regulatory community would be achieving incomplete reform of capital regulation absent a new and enhanced leverage ratio requirement.

I appreciate the opportunity to speak to you today and am happy to answer any questions.

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[1] The Dodd Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. L. 111-203) does place a limit of 15:1 leverage for an institution that poses a grave threat to the financial stability of the U.S. when such a limit would mitigate the threat. This limitation, however, applies only in the narrowest of circumstances, triggered to contain a risk once it has been identified rather than to prevent risk from materializing. Dodd-Frank also requires that the minimum leverage capital requirement be no lower than it

was on July 21, 2010 and that the requirement for bank holding companies and nonbank financial companies with assets greater than $50 billion be no lower than the leverage capital requirements for insured depository institutions under section 38 of the Federal Deposit Insurance Act and implementing regulations.

[2] Regulators should consider tangible common equity and Tier 1 common equity when establishing a leverage ratio requirement.

[3] Dawn Kopecki, *U.S. Considers Bringing Fannie, Freddie on to Budget*, Bloomberg (September 11, 2008) *available at* http://www.bloomberg.com/apps/news?pid=newsarchive&sid=adr.czwVm3ws&refer=home.

[4] In the area of regulatory capital, the banking agencies are working to complete the rulemaking process initiated with the three NPRs published last June. While these NPRs do increase the level of risk-based capital requirements and strengthen the current definition of capital, I believe more focus needs to be paid to simple leverage anchored in tangible common equity.

[5] Adrian Blundell-Wignall and Caroline Roulet, *Business Models of Banks , Leverage, and the Distance-to-Default*, OECD (2012) *available at* http://www.oecd.org/finance/BanksBusinessModels.pdf. The relationship between leverage ratio and bank likelihood of default is statistically significant at the 1% level of significance.

[6] Andrew Haldane, Economist and Executive Director of Financial Stability *The Dog and the Frisbee*, Speech Given at the Federal Reserve Bank of Kansas City's 36th Economic Policy Symposium, Jackson Hole Wyoming (2012) at Table 4.

[7] Adrian Blundell-Wignall and Paul Atkinson, *Deleveraging*, *Traditional Versus Capital Markets Banking and the Urgent Need to Separate and Recapitalize G-SIFI Banks* OECD (2012) *available at* http://www.oecd.org/finance/financialmarkets/Deleveraging,%20Traditional%20versus%20Capital%20Markets%20Banking.pdf.

[8] Dexia, "Deterioration of the environment in the second half of 2011 leads the Group to announce radical restructuring measures, Press Release (23 February 2012) at Appendix 2 *available at* http://www.dexia.com/EN/journalist/press_releases/Documents/20120223_CP_UK.pdf.

[9] Andrew Bailey, Bank of England 2012 Financial Stability Report, Testimony Before the Treasury Select Committee – U.K. House of Commons (January 15, 2013).

[10] *See*, *Bye Bye Basel? Making Basel More Relevant*, Barclays Equity Research (May 23, 2012).

[11] *See The Dog That Dug: (Yet) More Digging Into RWAs…*, Barclays Equity Research (September 21, 2012).

[12] Basel Committee on Banking Supervision, *Regulatory Consistency Assessment Programme – Analysis of Risk-Weighted Assets for Market Risk* (January 2013) at 3 *available at* http://www.bis.org/publ/bcbs240.pdf.

[13] Stefan Ingves, *From Ideas to Implementation*, Speech at the 8th High Level Meeting, Cape Town (24 January 2013) at 6 *available at* http://www.bis.org/review/r130124a.pdf?frames=0.

[14] *See, e.g.,* Mario Draghi, the current President of the European Central Bank who said in April 2008, "[o]ur conviction is that […] institutions have accumulated a level of leverage that was both misperceived and excessive." *See also* E. Gerald Corrigan, former President of the Federal Reserve Bank of New York, who said in 2008 that "leverage in its many forms clearly was a driving force in creating the market conditions that would trigger the crisis…" The Credit Crisis. The Quest for Stability and Reform, The William Taylor Memorial Lecture, Group of Thirty, Washington DC (2008) at 8.

[15] Paul A. Volcker, *Comment Letter re: Regulatory Capital Rules* (October 25, 2012).

[16] Systemic Risk Council, *Comment Letter re: Regulatory Capital Rules* (October 4, 2012) at 3.

[17] Andrew Haldane, Testimony Before the United Kingdom Parliamentary Commission on Banking Standards Joint Committee (January 21, 2013).

[18] Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, *Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Minimum Regulatory Capital Ratios, Capital Adequacy, Transition Provisions, and Prompt Corrective Action* (Notice of Proposed Rulemaking), 77 FR 52792 (Aug. 30, 2012) at 52801-02.

[19] *Id.*

[20] Basel Committee on Banking Supervision, *Strengthening the Resilience of the Banking Sector* (December 2013)

[21] *Id.*