

**Testimony before the
Senate Committee on Banking, Housing and Urban Affairs**

by

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**Hearing on
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Chairman Shelby, Ranking Member Brown, and members of the Committee, thank you for this opportunity to participate in today’s hearing on bank capital and liquidity regulation. In my testimony, I will make two central observations regarding the regulation of bank capital.

First, I will emphasize the importance of equity capital and the failure of current capital regulations to restrict heavy borrowing by financial institutions whose distress or default would cause collateral harm. While adequate capitalization is central to the safe operations of financial institutions, little justifies the current low levels of capital required under banking rules. More equity capital and less debt makes banks more resilient and better able to withstand inevitable economic crises. Current capital regulations were not derived from a valid analysis of the costs and benefits of different requirements. In fact, a growing body of research finds that current levels are unsafe and without justification from the public’s perspective. The system can be made safer while at the same time correcting many distortions by significantly increasing equity capital.

Second, I will observe that the significant public resources allocated to the firm-specific supervisory process (through examination and stress testing) are not utilized efficiently given the dangerously low capital requirements. Supervision is difficult

particularly given the conflict between the narrow interests of the banks in operating with so much debt and the public interest in making them safer by insisting, as normal creditors would have insisted, on much more equity to protect creditors and the public.

The risks associated with inadequate capitalization are borne by the public. These risks appear invisible and are thus tempting to ignore. I urge the committee to consider a burden-shifting, precautionary approach to capital regulation that could more effectively protect the public from the negative effects of chronic under-capitalization that remains tolerated in banking.

Capital Ratios: Important but Insufficient

Financial institutions rely much more on borrowed money than other firms. One reason for this is that they have readily willing lenders in the form of depositors who need banks to smooth their uncertain need for cash. While tax advantages make debt an attractive source of funds for all firms (including non-bank firms), banks have added incentives. Banks borrow more than other firms because their creditors (e.g., depositors) are not as demanding as the creditors of non-bank firms. The risks to banks' creditors are minimized by governments' explicit (e.g., deposit insurance) and implicit guarantees that prevent their default. Banks' creditors thus are considerably more complacent than normal creditors,¹ and it falls on regulators to protect the creditors from banks' excessive risk-taking. Perhaps most troubling is the fact that the heavy borrowing and government subsidies feed on themselves. As a financial institution uses its borrowed money to expand, the expected government subsidy increases allowing the bank to borrow more and grow even larger.

Banks that borrow less money to fund their operations are more resilient and therefore less likely to require government assistance or to become distressed and stop lending or cause financial instability through their connections in the system. For this reason, rules that restrict a bank's borrowing (known as "capital regulation") have emerged as the cornerstone of modern bank regulation. Numerous studies demonstrate that better

¹ Viral Acharya, Hamid Merhan, Til Schuermann, and Anjan Thakor, *Robust Capital Regulation*, Federal Reserve Bank of New York Staff Reports, no. 490 (June 2011).

capitalized banks perform better during crises.² Capital regulation is appealing because, if done properly, it diminishes the need for other, potentially more intrusive, forms of prudential regulation.

Despite the manifold positive and normative claims supporting capital regulation, it suffers from limitations. First and foremost is the reality that the international regulation of capital, which began in the 1980s, did not prevent the devastating Financial Crisis in 2008. Using this measure, capital regulation has been a failure. The reason for this is that the requirements were much too low and allowed regulated institutions to take enormous risk and use much more borrowed money even while appearing to satisfy the rules. Simply put, capital regulation failed because it allowed banks to operate with far too little equity and much too much debt. Perhaps this should come as no surprise given the lack of any principled basis for current minimum capital rules. The Basel Committee on Bank Supervision never demonstrated support for setting the original risk-based capital ratio at 8% and yet that number continues to serve as a key point of reference. Moreover, U.S. bank regulators have never provided more than vague reasons for setting minimum capital ratios other than the observation that most banks were already in compliance with any newer, higher standards.³

In addition to the reality that current levels of capital (e.g., the 8% risk-based capital ratio referenced above or the 4% leverage ratio discussed below) lack foundation, the components of capital are subject to seemingly endless debate. Valuing assets, assessing the riskiness of assets, identifying off-balance sheet exposures – to name but a few – are all essential elements in the calculation of capital ratios and all are debatable and subject to error. Limitations in the various ratios are also apparent. The standard criticism of the leverage ratio, for example, is that it does not distinguish between types of assets. The

² Sebastien Gay & Balthazar D. Bergkamp, *Does Basel Save Our Banks? The Effect of Basel I Capital Requirements on Bank Failures* (2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2629268 [<https://perma.cc/5PMZ-BAKQ>]; Andrea Beltratti & René M. Stulz, *The Credit Crisis Around the Globe: Why Did Some Banks Perform Better?*, 105 J. Fin. Econ. 1, 8–10 (2012); Allen Berger & Christa H.S. Bouwman, *How Does Capital Affect Bank Performance During Financial Crises?*, 109 J. Fin. Econ. 146 (2013). An International Monetary Fund (“IMF”) study found that banks with higher and better-quality capital were able to continue lending during the Financial Crisis. Tümer Kapan & Camelia Minoiu, *Balance Sheet Strength and Bank Lending During the Global Financial Crisis*, (Int’l Monetary Fund IMF Working Paper No.13/102 May 2012).

³ Eric A. Posner, *How Do Bank Regulators Determine Capital Adequacy Requirements*, 82 U. CHI. L. REV. 1853 (2015).

typical criticism of the risk-weighted capital ratio is that it attempts to measure the riskiness of assets but does so poorly. Basel II was an attempt to improve risk weighting but was never fully implemented in the U.S. because of the FDIC's concerns that the newer, more complex risk assessment (which relied on banks' internal risk models for key inputs) would actually result in higher risk concentration. Importantly, all of these complications and limitations are reduced when the minimum required is not so minimal.

Given the obvious benefits of equity capital, policy makers raised regulatory capital requirements so that banks are now required to fund their operations with less debt than in the years prior to the Financial Crisis. With regard to the leverage ratio which compares capital to unweighted assets, U.S. banks have long been required under Federal Deposit Insurance Corporation regulations to maintain a leverage ratio of 4%.⁴ More recently, bank holding companies have also been required to comply with a leverage ratio of 4%.⁵ Consistent with the Basel III reforms, the U.S. has incorporated a more demanding supplementary leverage ratio. Bank holding companies with assets equal to or greater than \$250 billion or on-balance sheet foreign exposures equal to \$10 billion must comply with a supplementary leverage ratio of 3%.⁶ The supplementary leverage ratio includes on-balance sheet and many off-balance sheet exposures in the calculation of assets.⁷ In addition, going beyond the standards set under Basel III, beginning on January 1, 2018, bank holding companies with assets greater than \$700 billion must maintain an enhanced supplementary leverage ratio of 5% to avoid restrictions on dividends and discretionary bonus payments.⁸ These newer capital ratios remain, however, much lower than many

⁴ 12 C.F.R. § 325.3(b)(2). Certain highly rated institutions are held to a 3% leverage ratio. *Id.* § 325.3(b)(1). But that rule must be balanced against prompt corrective action rules (triggering certain agency action as bank capital deteriorates), which require an adequately capitalized bank to have a 4% or greater leverage ratio. *Id.* § 325.103(b)(2)(iii).

⁵ 12 C.F.R. § 217.10(a)(4).

⁶ 12 C.F.R. § 217.10(a)(5) (supplementary leverage ratio of 3% applies to "advanced approaches Board-regulated institutions," which is defined in 12 C.F.R. § 217.100(b) through 12 C.F.R. § 217.2). More capital is required to meet the supplementary leverage ratio than the simple (generally-applicable) leverage ratio.

⁷ 12 C.F.R. § 217.10(c)(4).

⁸ 12 C.F.R. § 217.11(c). In addition, the FDIC-insured bank subsidiaries of such large institutions must maintain a supplementary leverage ratio of 6% to be considered well capitalized under prompt corrective action rules. 12 C.F.R. § 324.403.

experts believe are adequate for safe operations and challenges persist regarding the inputs to those ratios which significantly impact their effectiveness.⁹

A growing number of authoritative commentators are urging significantly higher capital requirements. It is important to note that differences in percentages discussed by various experts may or may not signal a lack of consensus. The ratios involved rely heavily on key definitions (what constitutes equity, for example) and measurements (e.g., what is the value of an asset). Even so, a consensus that more is better has formed. Economists Admati and Hellwig argue for levels in the 20 to 30% range relative to total assets and they note the measurement issues.¹⁰ An eminent group of 20 scholars urged that if “at least 15 per cent, of banks’ total, non-risk-weighted, assets were funded by equity, the social benefits would be substantial.”¹¹ The Systemic Risk Council, a group of former policymakers and legal and financial experts, has written in support of a 10% non-risk-weighted capital requirement.¹² Researchers at the Bank of England and Bank of International Settlements estimate that “optimal bank capital . . . should be around 20% of risk weighted assets.”¹³ Brown-Vitter¹⁴ would require the largest banks to comply with a 15% leverage ratio.

While few would deny the significant benefits of equity capital, the industry claims that equity is costly. Assertions regarding the costs of equity, however, identify potential private costs not social ones.¹⁵ For example, if banks’ funding costs increase due to a higher equity requirement, then, it is said, banks will charge their loan customers higher interest rates. Yet these private benefits of excessive borrowing are funded through

⁹ See, for example, FDIC Vice Chairman Hoenig’s discussion of the leverage ratio treatment of cleared derivatives. Thomas M. Hoenig, *The Leverage Ratio and Derivatives*, Presented to the Exchequer Club of Washington, DC (Sept. 16, 2015).

¹⁰ Anat Admati & Martin Hellwig, *THE BANKERS’ NEW CLOTHES: WHAT’S WRONG WITH BANKING AND WHAT TO DO ABOUT IT* 182 (Princeton Univ. Press, 2013).

¹¹ Anat Admati et al, *Healthy banking system is the goal, not profitable banks*, FINANCIAL TIMES (Nov. 8, 2010).

¹² Letter from Sheila Bair, Founding Chair of the Systemic Risk Council, to Senator David Vitter (May 20, 2015).

¹³ David Miles, Jing Yang, and Gilberto Marcheggiano, *Optimal Bank Capital*, Bank of England Discussion Paper No. 31. (2011).<http://www.bankofengland.co.uk/monetarypolicy/Documents/externalmpc/extmpcpaper0031.pdf>

¹⁴ Terminating Bailouts for Tappayer Fairness Act of 2013, 113th Cong. (2013).

¹⁵ For a full exploration of this issue, see Anat Admati, *The Compelling Case for Stronger and More Effective Leverage Regulation in Banking*, 43 JOURNAL OF LEGAL STUDIES 535 (2014).

taxpayer-paid subsidies and also make the financial system fragile, thus being highly costly for society. If policymakers desire low cost loans, then such subsidies can be provided directly to borrowers in ways other than through subsidies that reward fragile banks.

Capital Supervision: Unrealized Promise of Safety and Soundness

The rules that govern bank capital, as discussed above, are often referred to as “minimum” capital ratios. Institutions that comply with the current ratios are not necessarily safe or unlikely to fail in a crisis, given that the requirements still allow extremely high levels of debt. Experience suggests that minimum capital ratios are a lagging indicator of a bank’s financial stability. Banks that failed or required government support appeared well adequately capitalized, under the then current rules, during the Financial Crisis.¹⁶ Thus, the firm-specific supervisory process is meant to correct the deficiencies of the one-size-fits all rule-based regulation.

The supervisory process plays a significant role in the regulation of banks’ capital. Capital adequacy is a key measure in the supervisory process; it is listed as the first factor under the supervisory rating system, CAMELS.¹⁷ Through the process of bank examination, regulators can (and do) determine that a particular bank must exceed the minimum capital ratios set in applicable rules. A study of capital enforcement actions brought against banks (virtually all smaller banks) from the period of 1993 to 2010 found that bank regulators had imposed a leverage ratio of between 4.5% and 28% through formal enforcement actions during the period studied.¹⁸

In response to the Financial Crisis, the Federal Reserve reformed many aspects of its supervision of large banks. With regard to capital supervision, large bank holding companies with assets of fifty billion dollars or more are required by the Federal Reserve to submit an annual capital plan and are subject to the Federal Reserve’s annual

¹⁶ Thomas M. Hoenig, FDIC Vice Chairman, *Basel III Capital: A Well-Intended Illusion* (Ap. 9, 2013).

¹⁷ CAMELS is an acronym for the examiners assessment of six key areas: Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk.

¹⁸ Julie Andersen Hill, *Bank Capital Regulation by Enforcement: An Empirical Study*, 87 *IND. L.J.* 645, at 681 (2012). Hill’s study includes data for enforcement actions that relied on other ratios as well, including risk-based capital ratios. The banks that was subjected to a 28% leverage ratio was identified as an outlier in Hill’s study. Most banks subject to higher leverage ratios fell within a range of 12% and 17%.

Comprehensive Capital Analysis and Review (“CCAR”) process.¹⁹ The Federal Reserve may object to a bank holding company’s capital plan and thereby prohibit the bank holding company from making capital distributions (i.e., paying dividends to shareholders, among other things). CCAR is an annual assessment that complements supervisory stress testing mandated under Dodd-Frank.²⁰

CCAR includes both a qualitative assessment of a bank holding company’s capital planning process and a quantitative assessment of the bank holding company’s ability to maintain post-stress capital ratios above the applicable minimum ratios in effect.²¹ By testing banks’ regulatory capital under both expected and stressed (hypothetical) conditions,²² CCAR, in effect, results in higher minimum capital requirements for large bank holding companies. For example, with regard to the leverage ratio, while the minimum requirement under the Federal Reserve’s rules is 4%, CCAR requires, in effect, higher leverage ratios for all thirty-one individual bank holding companies reviewed. The 2015 CCAR projects a minimum leverage ratio of between 4.1% to 7.6% under severely adverse scenarios and between 4.5% to 9.1% for adverse scenarios for bank holding companies with assets equal to or greater than \$250 billion or on-balance sheet foreign exposures equal to \$10 billion.²³ Note that the 2015 CCAR uses the general leverage ratio and not the stricter supplementary leverage ratio discussed above. The supplementary leverage ratio will also not be used in the 2016 CCAR.²⁴

¹⁹ For a full discussion of the development and early experience with the CCAR program, see Robert F. Weber, *The Comprehensive Capital Analysis and Review and the New Contingency Bank Dividends*, 46 SETON HALL L. REV. 43 (2015).

²⁰ 12 U.S.C. § 5365(i)(1) (2012).

²¹ BD. OF GOVERNORS OF THE FED. RESERVE SYS., COMPREHENSIVE CAPITAL ANALYSIS AND REVIEW 2015: ASSESSMENT FRAMEWORK AND RESULTS 9 (Mar. 2015).

²² Stressed conditions are provided both by the Federal Reserve and developed by the bank holding company itself. 12 C.F.R. § 225.8(d)(2)(i)(A).

²³ BD. OF GOVERNORS OF THE FED. RESERVE SYS., COMPREHENSIVE CAPITAL ANALYSIS AND REVIEW 2015: ASSESSMENT FRAMEWORK AND RESULTS 15–18 (March 2015). The Federal Reserve has completed Comprehensive Capital Analysis and Review (“CCARs”) every year since 2011. Results from year to year during that time are somewhat difficult to compare. This is because the CCAR quantitative assessment focuses on a bank holding company’s ability to maintain required minimum ratios during stress periods and the required minimum ratios have changed during this time period. BD. OF GOVERNORS OF THE FED. RESERVE SYS., COMPREHENSIVE CAPITAL ANALYSIS AND REVIEW 2014: ASSESSMENT FRAMEWORK AND RESULTS 10, Box 2 (Mar., 2014).

²⁴ BD. OF GOVERNORS OF THE FED. RESERVE SYS., COMPREHENSIVE CAPITAL ANALYSIS AND REVIEW 2016 SUMMARY INSTRUCTIONS 6 (January 2016).

While the effective imposition of higher capital requirements through CCAR (or, for smaller banks, via administrative enforcement) sounds promising, this system is actually at odds with the concept of “prudential” regulation in that the supervisory process builds only incrementally upon weak minimum rules.²⁵ Consider the fact that the CCAR process is one that tests – hypothetically -- a bank’s ability to maintain compliance with capital ratios under various stressed scenarios and recall the lack of any principled basis on which the minimum ratios were derived. Even assuming the value of testing against low equity levels, stress testing presents significant challenges. For example, the Office of Financial Research released a study raising serious concerns regarding stress tests’ evaluation of counterparty risk.²⁶ Broadly, stress tests rely heavily on modelling of future events and the Financial Crisis highlighted the folly of over reliance on such predictions.

Our combined rulemaking and supervisory system would be more effective if capital ratios applicable to all banks were set high—high enough so that the risk of serious undercapitalization, distress or insolvency is very small. This would mean that capital ratios would be consistent with a precautionary approach, erring on the side of more capital. Conceptually, capital regulation would be set and defined as “prudent” capital as opposed to “minimum” capital. While discussions of capital regulation tend to focus on systemically important firms, prudent capital requirements should not be limited to such firms. As discussed above, bank regulators routinely determine that small banks are undercapitalized even when they meet current minimum standards. Large regional banks may not be too big to fail, but they can contribute significantly to the depth of a financial crisis (Washington Mutual and Countrywide are obvious examples). It may be appropriate to have different thresholds based on bank size (as is the current practice with regard to minimum capital rules) but capital regulations for all banks should require much more significant equity than what is required under current rules. In addition, the supervisory process should continue to be engaged, dynamically, for assurance of compliance with rules and assessment of firm-specific risks. The supervisory process would, for example,

²⁵ “The premise of the stress tests is the flawed notion that equity is scarce and expensive and that banks should have ‘just enough.’” Anat R. Admati, *The Missed Opportunity and Challenge of Capital Regulation*, 235 NATIONAL INSTITUTE ECONOMIC REVIEW R4, R10 (Feb. 2016).

²⁶ Jill Cetina, Mark Paddrik, Sriram Rajan, *Stressed to the Core: Counterparty Concentrations and Systemic Losses In CDS Markets*, OFR Working Paper 16-01 (Mar. 8, 2016).

trigger prompt corrective action well in advance of insolvency to build equity back to precautionary levels through retained earnings and other actions so the fear of insolvency does not rattle markets.

Prudent capital regulation would shift downside risk from the public to managers and equity investors who enjoy the upside and are thus the most natural candidates to bear, and thus care more about, the downside. In well-functioning markets, those who benefit most from banks' profitability should bear the downside burden. Strong equity capital would correct the current distortion and establish safer banks and a more resilient financial system.