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"Bank Capital and Liquidity Regulation Part II:
Industry Perspectives"

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Chairman Shelby, Ranking Member Brown, and members of the Committee, my name is Greg Baer and I am the President of The Clearing House Association and General Counsel of The Clearing House Payments Company. Established in 1853, The Clearing House is the oldest banking association and payments company in the United States. The Clearing House Association is a nonpartisan advocacy organization dedicated to contributing quality research, analysis and data to the public policy debate.

The Clearing House is owned by 24 banks which provide commercial banking services on a regional or national basis, and in some cases are also active participants in global capital markets as broker-dealers and custodians. Our owners fund more than 40 percent of the nation's business loans held by banks, which includes almost $200 billion in small business loans, and more than 75 percent of loans to households. Reflecting the composition of our membership, throughout my testimony, I will focus on the effects of regulation primarily on U.S. globally systemically important banks, U.S. regional banks of all sizes, and the U.S. operations of foreign banking organizations with a major U.S. presence.

One might assume that eight years after the financial crisis would be a good time to assess the consequences of the established post-crisis regulatory framework. As I will discuss, however, the pace of regulatory change is not slowing, and there are pending or planned proposals – most never envisioned by the Dodd-Frank Act – that would fundamentally redouble or rework what has already been done. Thus, my testimony will have three parts:

First, a description of the core post-crisis reforms that clearly have made commercial banks more resilient and resolvable, yielding benefits that are worth their economic costs. These benefits are sizeable and quantifiable.

Second, a description of pending or recently enacted reforms that impose meaningful impediments to economic growth and access to credit by consumers and smaller companies, but provide few if any marginal benefits beyond what has already been achieved by the core reforms. In some cases these regulations are flawed conceptually or operationally; in others, their marginal benefit is small because they are duplicative (or triplicative) of other rules. And in many cases, a reform that might be reasonable for some has been applied on a one-size-fits-all basis to banks whose activities pose few if any relevant risks.

Third, a broader look at some of the cumulative effects of post-crisis regulation, both core and non-core. Chief among these are (i) a migration of risk-taking and traditional banking activities to less regulated and potentially less resilient financial market participants, (ii) a decrease in credit availability for small

businesses and lower-income individuals, and (iii) fundamental and unpredictable shifts in the structure of capital markets that are rendering them less conducive to meeting the funding needs of the economy.

I. Core Post-Crisis Banking Reforms

Core post-crisis banking reforms generally seek to achieve two goals: resiliency and resolvability. The former significantly reduces the chance of bank failure through heightened capital, liquidity and other resiliency measures; the latter establishes a legal and operational framework that ensures that any bank can fail without systemic impact or taxpayer assistance. Each of these is described in detail below.

a. Improvements to Resiliency through Enhanced Capital and Liquidity

One of the key lessons of the financial crisis is the critical importance of maintaining sufficient capital and liquidity levels to ensure that banks can absorb outsize losses and heightened liquidity demands that typically accompany periods of financial stress. Responding to that key lesson, banks have *significantly* increased the amounts of high-quality capital and liquid assets they hold on their balance sheets, and regulators have enacted a range of reforms that require that this dramatic increase in the resiliency of banks remain in place.

i. Current Capital Levels

The numbers speak for themselves. The aggregate tier 1 common equity ratio of TCH's 24 owner banks rose from 4.6 percent at the end of 2008 to 12.1 percent at the end of last year. In dollar terms, tier 1 common equity nearly tripled from about $326 billion to $956 billion over the past seven years.

As a benchmark for just how resilient large banks' capital positions have come post-crisis, consider the results of the Federal Reserve's stress test exercise (the "Comprehensive Capital Analysis and Review," or CCAR), which attempts to measure the ability of banks to withstand a severe economic downturn. For the 2016 exercise, banks must demonstrate how they would perform under a sudden and severe recession and coincident market crisis that features the following:

- A sudden jump in the unemployment rate of 4 percentage points (from 5 percent to 9 percent) during the first 4 quarters of the scenario, which is nearly twice as severe as the increase that occurred during the 2007-2009 financial crisis (when unemployment increased only 2 percentage points over the first year);
- A sudden decrease in GDP of more than 6 percentage points;

- An abrupt rise in the BBB corporate bond spread;
- A 50 percent drop in the equity market over four quarters, an 11,000 point loss on the Dow;
- For banks with substantial trading and processing operations, the abrupt failure of their largest counterparty; and
- The emergence of negative short-term interest rates.[1]

After this stress, large banks must meet a series of capital requirements, including a 4.5 percent common equity tier 1 ratio.[2] And they must do so assuming they do nothing to shrink their balance sheets, reduce their dividend, or postpone planned share repurchases – almost certainly deeply counterfactual assumptions. Thus, a large bank that passes the CCAR exercise not only has sufficient capital to avoid failure under historically unprecedented conditions – it must have enough capital to emerge from such an event resilient and doing business as usual.

ii. Core Capital Regulations

The level of capital that now exists in the U.S. banking system is not merely a transitory trend; a series of regulatory requirements either has driven these changes or prevents their reversal.

Increases in the quality and quantity of required capital. The financial crisis taught us that common equity should be the predominant component of tier 1 capital, as it is most effective at absorbing losses. Accordingly, the Basel III capital standards and U.S. implementing rules establish common equity as the predominant component of capital.

Emphasis on stressed rather than static measures of capital adequacy. Capital regulation now emphasizes stress testing to measure banks' capital adequacy. The first stress test deployed by the Federal Reserve was its Supervisory Capital Assessment Program (SCAP) exercise in 2009, which played a crucial role in ending the financial crisis. SCAP was subsequently codified in the form of the Dodd-Frank Act Stress Tests (DFAST) and the CCAR process

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1 *See* Board of Governors of the Federal Reserve System, *2016 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule* (Jan. 28, 2016), *available at* /www.federalreserve.gov/newsevents/press/bcreg/bcreg20160128a2.pdf

2 The quantitative assessment of a bank's capital plan also requires a tier 1 risk-based capital ratio above 6 percent, a total risk-based capital ratio above 8 percent and a tier 1 leverage ratio above 4 percent.

described above. As noted below, we have serious concerns about how CCAR is applied in practice, but believe that it is a core reform, as stress testing is an important and necessary tool for assessing the health of the banking system. In particular, stress testing represents a key improvement in supervisory practices because it incorporates a *forward looking*, *dynamic* assessment of capital adequacy, and is less reliant on static measures and recent historical performance.

Extension of bank capital requirements to major broker-dealers. Prior to the financial crisis, non-bank broker-dealers were subject to considerably less stringent capital regulation than banks. Through the course of the crisis, all large non-bank broker-dealers either (i) failed (*e.g.*, Lehman Brothers), (ii) were acquired by bank holding companies (*e.g.*, Merrill Lynch and Bear Stearns), or (iii) converted to bank holding company status (*e.g.*, Goldman Sachs and Morgan Stanley), such that all remaining large broker-dealers are now subject to bank holding company capital regulation. And given current regulation, it is difficult to imagine the emergence of a non-bank-affiliated broker-dealer of significant size.

Additional capital requirements. Improving the quality of bank capital and extending the reach of capital requirements may have been sufficient to forestall the last crisis, even at then-current capital requirements, but requirements have increased significantly as the denominator for capital ratios has been significantly expanded and the required ratios considerably increased. For example, Basel 2.5 more than doubled capital requirements for capital markets assets, and Basel III requires large banks to maintain a minimum risk-based common equity tier 1 ratio of 4.5 percent, as well as a "capital conservation buffer" of an additional 2.5 percent and for some banks a G-SIB surcharge which can range from 1 to 4.5 percent.[3]

iii. Core Liquidity Regulations

Large banks are now also dramatically more liquid, and thus substantially less likely to fall victim to a run by depositors or other short-term creditors. A recent FSOC financial stability report shows that the largest banks (which it defined as those with assets of $700 billion or more) now hold about 30 percent of their balance sheet in the form of liquid assets, nearly double the share they held pre-crisis.[4] This outcome has been driven by another of the core post-crisis reforms: the liquidity coverage ratio (LCR).

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[3] *See* 78 Fed. Reg. 62018 (Oct. 11, 2013) (final rule).

[4] *See* Financial Stability Oversight Council, *2015 Annual Report*, at 61 (2015).

The LCR requires banks to hold high-quality liquid assets (HQLA) sufficient to meet their potential peak funding needs over a 30-day period of severe idiosyncratic and market stress.[5] HQLA include cash reserves held at Federal Reserve Banks, U.S. Treasury securities, and a small set of other assets that can be sold for value even under extreme stress. In addition to the specific requirements of the LCR, the Federal Reserve also now requires banks to conduct monthly stress tests of their liquidity at overnight, 30-day, 90-day, and one-year horizons, at a minimum.[6]

A critical component of the LCR is how the stress scenario is calibrated, including the pace at which banks lose funding or are able to liquidate assets. As a procedural matter, commendably, the LCR stress scenario was explicitly designed to resemble conditions during the worst of the recent financial crisis, based on extensive empirical analysis, and subjected to public comment. Although we have concerns with a few specific aspects of the final LCR framework, as described below, we strongly support the general thrust of the LCR, as it will help to ensure that banks with complex funding strategies remain resilient in the face of future liquidity stresses.

b. Resolvability: A Successful Legal & Operational Framework to Resolve Large Banks without Taxpayer Support

Title I and Title II of the Dodd-Frank Act are core reforms that ensure that any banking organization can be resolved in a way that requires no taxpayer assistance and does not destabilize the broader financial system. For U.S. global systemically important bank holding companies (G-SIBs) engaged in substantial non-banking activities, this required a new framework, described below. For more traditional commercial banks that hold substantially all of their assets with an insured depository institution, the crisis showed that the FDIC possessed the necessary authority and expertise to resolve them, and major changes were not required.

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5 *See* 79 Fed. Reg. 61440 (Oct 10, 2014) (final rule).

6 *See* 79 Fed. Reg. 17240 (March 27, 2014) (final rule); 12 C.F.R. § 252.35.

i. The Legal Framework: Titles I & II and Single-Point-Entry Resolution

The Dodd-Frank Act established a legal framework for the resolution of a large banking organization, which the Federal Reserve and FDIC have implemented in a thoughtful way. For most U.S. G-SIBs, this progress includes the single-point-of-entry (SPOE) resolution strategy. Under the SPOE strategy, all of the losses across a U.S. G-SIB would be absorbed by shareholders and creditors of its parent holding company, which would fail and be put into a Chapter 11 bankruptcy or an FDIC receivership under Title II of Dodd-Frank.

The two principal benefits of this strategy are (i) making it legally and operationally feasible to impose losses on holding company debt holders, thereby vastly expanding the loss absorbency of the relevant banks, and (ii) allowing the material operating subsidiaries to remain open and operating, thereby minimizing the systemic consequences of a large banking organization failure.

ii. The Operational Framework: Resolution Stays on Financial Contracts and TLAC

Two significant developments have greatly enhanced the credibility of SPOE as a resolution strategy.

Resolution Stays on Financial Contracts. One potential shortcoming of the SPOE strategy was identified by regulators and market participants: if the parent holding company enters into a bankruptcy or resolution proceeding, then the counterparties of the holding company's subsidiaries might exercise "cross-default" rights and terminate their derivatives and similar financial contracts with the subsidiaries, and then seize and liquidate the collateral (even though the subsidiaries remain open, solvent and performing on their contractual obligations). This would drain liquidity from the group in resolution, and the sale of the collateral into the market at a time of stress could have systemic consequences, as it did in the financial crisis.

To prevent this outcome, each U.S. G-SIB has voluntarily adhered to the ISDA 2015 Universal Resolution Stay Protocol,[7] which provides for the explicit recognition of resolution stays on cross-default rights in financial contracts between and among the world's largest dealer banks. In order to extend this

[7] International Swaps and Derivatives Association ("ISDA"), Adhering Parties: ISDA 2015 Universal Resolution Stay Protocol (last updated June. 17, 2016), *available at* https://www2.isda.org/functional-areas/protocol-management/protocol/22.

systemic protection beyond dealer bank transactions, the Federal Reserve recently proposed a rule that would generally require G-SIBs to include resolution stays in financial contracts with *all* of their counterparties. The Clearing House strongly supports this proposal, as the inclusion of resolution stays in financial contracts will make it easier to implement an SPOE resolution.

Total Loss Absorbing Capacity. In order for SPOE to be effective, a firm must maintain sufficient loss absorbing capacity that can be bailed in to recapitalize the firm even after a massive loss, and that bail-in must be operationally feasible. The former is achieved by holding at the holding company level substantial liabilities that cannot run in stress (basically, equity and long-term debt).

Accordingly, the Federal Reserve has proposed a "total loss absorbing capacity" (TLAC) rule that would require U.S. G-SIBs to maintain minimum total loss absorbing capacity equal to 21.5 percent to 23 percent of its risk-weighted assets, and 9.5 percent of its total assets.[8] *The eight U.S. G-SIBs alone will be expected to maintain, on an aggregate basis, more than $1.5 trillion in total loss absorbing capacity.* The scale of this reform has not been widely appreciated.

Operational feasibility is achieved by minimizing the types of other holding company creditors, thereby avoiding disputes among creditor classes in bankruptcy. The Federal Reserve's proposed rule would limit the amount of short-term debt or other liabilities at the holding company, and make clear that operating liabilities of subsidiaries are senior to the bail-in/TLAC equity and debt at the holding company. Thus, a U.S. G-SIB's losses can be imposed entirely on the private sector without inducing the holders of the group's short-term debt or financial contracts to run, or the holders of its other operating liabilities to cut off critical services

Clear Evidence of Success

Investors and markets appear convinced that equity and long-term debt holders are fully at risk in the event of failure, and that government assistance will not be required, or available, to resolve a large banking organization. Put another way, they appear convinced that large banks are no longer "too big to fail." The spreads that debt markets charge large banks have risen dramatically from pre-

[8] I also note that while we strongly support the TLAC requirement in principle, we do have several key concerns with the specific way in which the Federal Reserve has proposed to implement TLAC in the United States. *See* Letter from The Clearing House et al. to the Board of Governors of the Federal Reserve System (Feb. 19, 2016), *available at* www.theclearinghouse.org/issues/articles/2016/02/20160219-tch-comments-on-fed-s-tlac-proposal.

crisis levels. A Government Accountability Office (GAO) study released in July 2014 stated, "[o]ur analysis provides only limited evidence that large bank holding companies had lower funding costs since the crisis and instead provides some evidence that the opposite may have been true at the levels of credit risk that prevailed in those years."[9] The GAO found that any premium in the interest rates (that is, lower rates) that banks pay to borrow in the bond market had been significantly reduced, eliminated, or even reversed. Indeed, in half of the 42 models they employed, larger banks actually pay *more* to borrow than mid-sized banks issuing publicly traded debt.

Similarly, the ratings agencies now rate debt in accordance with the market reality reported by the GAO. At the time of the 2014 study, two of the three large rating agencies had already eliminated any "uplift" in ratings of bank holding company debt because of anticipated future government support. Since then, the third rating agency has also dropped any uplift for bank holding company debt.

In this context, it is also worth noting that post-crisis, large bank assets have shrunk as a share of the total economy, and remained stable as a share of total bank assets. This is not necessarily good news – if this trend was making them less diversified and therefore more risky, it would not be cause for celebration. But because bank absolute size does appear to be a concern to some, we note the trend.

As reflected in the following chart, starting with the simplest measure – total assets – the data show that assets at the largest banks grew during the recent crisis (almost exclusively because of "rescue" acquisitions in 2007-08) but post-crisis are shrinking relative to assets at smaller banks, and the economy as a whole (as represented by GDP).

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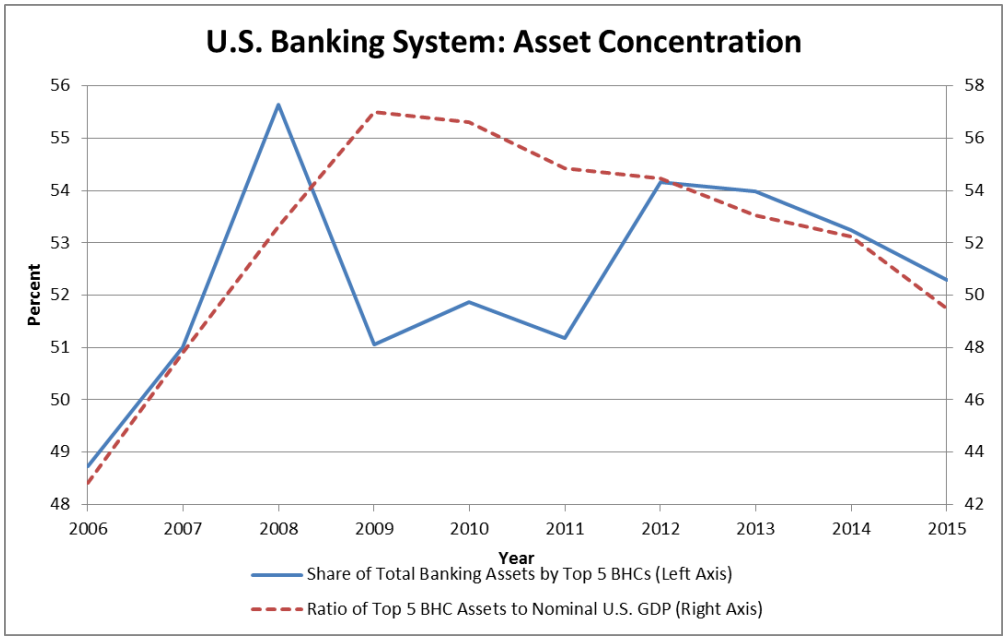
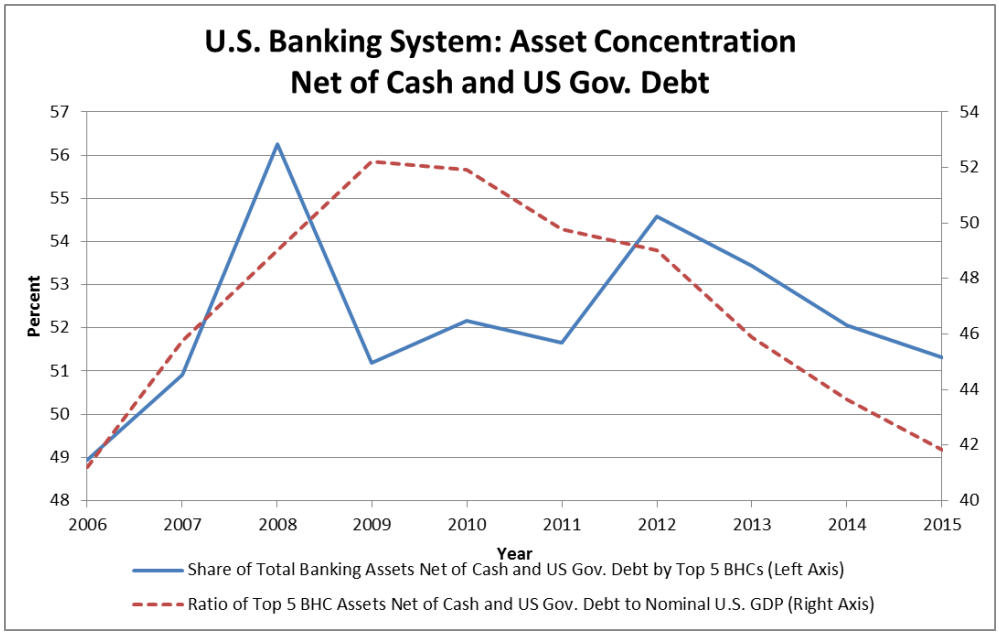
[9] Government Accountability Office, *Large Bank Holding Companies: Expectations of Government Support (GAO-14-621)* (July 2014) at 46. Academic research on post-crisis conditions is consistent with the GAO's findings. See also Javed Ahmed, Christopher Anderson, Rebecca Zarutskie, *Are the Borrowing Costs of Large Financial Firms Unusual?* (March 12, 2015), available at http://www.federalreserve.gov/econresdata/feds/2015/files/2015024pap.pdf



Even this presentation, however, significantly overstates the absolute and relative size of large banks post-crisis. As noted above, in the wake of the crisis, liquidity regulations required the largest banks (and only the largest banks) to increase dramatically their holdings of cash and cash equivalents. These assets can be readily sold in the event of a run, and their addition to the balance sheet makes the largest banks safer and sounder (and less profitable), not more risky. Deduct these assets, and one gets the *risk assets* held by the banks. Those assets are 10 percentage points smaller post-crisis.



Consider also how much risk the large banks are taking. Data here are harder to find in a way that can be aggregated, but the largest banks report their value-at-risk (VaR) as a common measure of how much they could lose in a day, with a stated confidence level. While an incomplete measure, it does allow for an apples-to-apples comparison over time. For the five largest reporting banks, their reported VaR for trading assets has declined on average by 63 percent since 2009.

II. Regulatory Measures that Yield Benefits Less than their Economic Costs

For the core reforms described above, it is reasonably clear that their benefits exceed their costs. But it is also clear that other current and pending regulations – or particular aspects or applications of those regulations – do not meet that test. Furthermore, in many cases, those costs are poorly understood and little measured.

Three keys to performing a regulatory cost-benefit analysis are as follows:

First, each regulation contains mandates and incentives that, while implicit rather than explicit, are nonetheless clear. Bank regulation necessarily favors some activities over others; thus, when regulatory requirements are calibrated at high levels, they create strong incentives for banks to no longer allocate their balance sheets according to actual economic risk but rather according to regulatory requirements. There is a common misperception that banks faced with a higher capital requirement can react in only three ways: accepting a lower return on equity, shrinking assets across the board, or increasing prices across the board. Under this view, regulation is agnostic or content neutral. In fact, large banks identify the business lines that are causing the higher capital (or liquidity) charge relative to actual economic risk, and then face a difficult decision of how much of that cost to require the business lines to earn back. As discussed in the third part of my testimony, we see dramatic evidence of this phenomenon in global capital markets businesses, where numerous large banks have either exited businesses entirely or dramatically reduced the amount of capital they are willing to commit to supporting market liquidity. Conversely, we have seen a strong trend globally for large banks to enter or expand private wealth management: this activity does not require significant capital or liquidity, and thus is a business smiled upon by the post-crisis regulatory regime.

Second, in assessing the benefit of a given rule against its cost, it is not sufficient to identify its standalone benefit. What is relevant is its *marginal* benefit – that is, what benefit it adds to the core reforms and others already enacted. For a rational cost–benefit analysis, it is not enough to simply say that a rule has the benefit of reducing the chances of a financial crisis like the last one:

the question is what that *marginal* benefit is, given the presence of other rules, and how it compares to the rule's cost (including that it might increase the chances of a financial crisis that is *unlike* the last one).

Third, in assessing benefits and costs, careful attention must be paid *to whom the rule applies*. This is because, in many cases, regulators have applied a particular reform to a wide range of banks on a nearly uniform basis. Such an approach to regulation, and to macroprudential regulation in particular, is inappropriate and inherently fails to account for the wide variety of business models and practices that exist among individual institutions. The application of prudential standards should not simply be a function of an organization's asset size, but should instead be based on the types of risk being run by the organization, driven largely by the types of activities it engages in.

Unfortunately, it is often exactly this untailored, size-based approach that has been taken in practice--much of the post-crisis prudential framework, including the Basel III capital and liquidity framework and the enhanced prudential standards established under Title I of Dodd-Frank, is not appropriately tailored to the diversity of banking organizations and business models that exist in the United States.

Below are some examples of recent regulations that raise these three sorts of questions.

a. Existing Capital Rules & Mandates

i. Supplemental Leverage Ratio

A leverage ratio measures the capital adequacy of a bank by dividing its capital by its total assets. Although the leverage ratio is seen as an alternative to risk-based measures of capital, the leverage ratio is in fact a risk-based measure of capital, albeit a bad one. It assesses the risk of each asset to be exactly the same – akin to setting the same speed limit for every road in the world. The risk of a Treasury security is assessed as the same as the risk of a loan to a startup with uncertain cash flows. The risk of holding a market-making portfolio of liquid, highly rated bonds is equated to the risk of holding a portfolio of illiquid loans to untested companies.

The inaccuracy of the leverage ratio – and the resulting misallocation of capital – has increased dramatically in recent years as a result of other regulatory mandates. As earlier noted, liquidity rules now require large banks to hold approximately 30 percent of their balance sheets in HQLA – predominantly cash, Treasury securities and other government securities. Large banks now hold

approximately three times as much of these assets as they did pre-crisis. Those assets rightly receive a zero or low risk weight in risk-based capital measures, but the leverage ratio completely ignores their actual risk – and creates a powerful disincentive to hold low risk assets beyond those required by regulation.

More practically, consider the combined effects of regulation on the decision to make a small business loan. That loan must be funded, and unless it is funded with retail or other very "sticky" deposits, the LCR requires the bank to hold HQLA (cash or cash equivalents) against that funding. While this treatment is appropriate, the leverage ratio then requires the bank to hold six percent capital against the HQLA which is not appropriate.[10] This increases the cost of making the loan – and unnecessarily so.

As another example, suppose an endowment wishes to make a deposit at a bank: that deposit is considered a run risk by the LCR, and so it requires HQLA; the LCR effectively imposes a six percent capital charge on the cash by requiring capital to be held against the HQLA.[11]

The impact of the U.S. leverage ratio is more pronounced on bank holding companies' capital markets activities, which are not funded by insured deposits. U.S. capital markets are the deepest, most liquid, and most efficient in the world, allowing U.S. companies as well as the government to finance growth and borrow more cheaply. At the heart of those markets are broker-dealers, which facilitate the issuance and trading of securities, and provide funding to other financial institutions. The broker-dealer business model involves holding well-hedged temporary inventories in low risk assets, as well as standing between borrowers and lenders in offsetting and well-collateralized repo transactions. Both activities earn only narrow margins; promote the liquidity and efficiency of financial markets; and entail little or no risk. However, both are balance-sheet sensitive; that is, they create assets on the books of broker-dealers -- assets that banks now have to fund in material part with expensive equity because of the supplementary leverage ratio requirement. Because of the thin margins earned in financial intermediation, the added cost from the supplementary leverage ratio requirement has a substantial impact on the amount of the activity.

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[10] Other large U.S. banks must hold a smaller (but by no means any more reasonable) 3 percent leverage capital against that same collateral.

[11] As discussed later, the disincentives do not end there: this transaction is considered short-term wholesale funding under the G-SIB surcharge calculation; also, while only a small part of the deposit is uninsured, the bank must pay deposit insurance premiums on the entire amount.

Another issue that has received recent notice is how the leverage ratio is working in opposition to the regulatory push for central clearing of derivatives. The leverage ratio requires banks to hold capital against client margin collected and held in a segregated account that unquestionably reduces the exposure of the bank, which ignores the fact that such margin not increases a bank's risk. As a result, it effectively requires banks to hold un-economic amounts of capital when they trade with a client and then clear the trade. Because of this, at least three major dealers have exited the business. Accordingly, CFTC Chairman Massad has called for the U.S. leverage ratio to be amended to take account of segregated margin.

All that said, there is a case to be made for a leverage ratio at a certain calibration. As we saw during the crisis, there will be times when banks (and other actors) seriously misjudge the risk of an asset class, and therefore undercapitalize it. Furthermore, if that asset class is illiquid and opaque to the markets (*e.g.*, mortgages or mortgage-backed securities), then market confidence in risk-weighted measures will fall, and markets may resort to a leverage measure themselves.

Thus, there is reason to establish a minimum leverage ratio below which a bank cannot fall as a failsafe measure in the event of a widespread failure to measure risk. However, *this ratio should be set as a backstop, and not at a level that drives daily misallocation of capital in the economy, as any measure that ignores risk is bound to do if made a binding constraint*. Here, the Basel Committee appears to have struck a fair balance by adopting a minimum leverage requirement of three percent. For U.S. G-SIBs, however, the U.S. banking agencies have set the ratio at six percent for banks and five percent for their non-bank affiliates. Thus, these banks are currently required to hold $53 billion in capital against cash reserve balances deposited at the Federal Reserve, and an additional $15 billion against Treasury securities. These are assets whose value banks are at no risk of misjudging; the capital allocated to them could be far better deployed to lending or supporting market liquidity.

ii. The Collins Amendment

The Collins Amendment to the Dodd-Frank Act mandates that the minimum capital requirements and risk-weightings for any particular bank, including large banks, be the same as those that apply to all banks generally, and prohibits the banking agencies from lowering these requirements. The intent of Congress in enacting the Collins Amendment was clear: to establish a simple measure of competitive parity.

In implementing the Collins Amendment, however, the U.S. agencies have defeated the goal of competitive equity by requiring large banks not just to meet the minimum capital ratios applicable to small banks, but to meet those ratios *plus* the many buffers of additional capital that larger banks must hold under Basel III: a capital conservation buffer; a countercyclical capital buffer; and a G-SIB capital surcharge. This was not a step envisioned by the Dodd-Frank Act, and indeed was not even proposed initially by the agencies. Nor was it undertaken with any meaningful cost-benefit analysis. But its implications are significant. It means that the less risk-sensitive standardized framework for risk-based capital is not merely a prudential backstop, but instead can be the binding measure of risk-based capital. This in turn penalizes certain assets for which the standardized approach and its risk weights are over-conservative and punitive, including both retail and personal lending to individuals and wholesale lending to businesses. By doing so, the agencies' implementation of the Collins Amendment unnecessarily exacerbates and amplifies the adverse effects of both higher capital requirements and the risk-insensitivity of the standardized approaches.

iii. G-SIB Surcharge

The capital surcharge for G-SIBs is designed to reduce the likelihood of failure such that the expected loss of a G-SIB's failure is approximately equal to that of a large, but non-systemically important bank holding company. While the methodology used to estimate the G-SIB capital surcharge is reasonable in principle, we have recently released a research paper that identifies major shortcomings in its calibration.[12] For example:

> The Federal Reserve's white paper includes the largest 50 banks each quarter…, a sample size that extends to banks that are so small that their experience may not be relevant. For example, at the end of the sample period, the set of 50 banks whose earnings were used to calculate the G-SIB surcharge had assets as low as $24 billion. However, in a 2014 response to a GAO study, the Federal Reserve expressed the view that it is inappropriate to compare such small banks to G-SIBs. Specifically, the Federal Reserve noted, that "a bank holding company with $10 billion in assets is too small to make a meaningful comparison to a bank holding company with $1 trillion in assets... A bank holding company of $50 billion in assets would provide a more relevant comparison..."
> For example, the now defunct First City Bancorporation of Texas, one of the ten smallest banks in the sample at $11.2 billion in assets, failed in the

[12] *See* The Clearing House, *Overview and Assessment of the Methodology Used to Calibrate the U.S. GSIB Capital Surcharge (*May 2016).

> late 1980s because of its concentrated exposure to energy and agricultural markets. It was also geographically highly concentrated, with 59 of its 60 subsidiaries located in Texas. …[I]nclusion of this bank in the sample accounts for 36 basis points of the G-SIB surcharge for an average G-SIB.[13]

As noted, the Federal Reserve has stated that the G-SIB surcharge is "designed to reduce a G-SIB's probability of default such that a G-SIB's expected systemic impact is approximately equal to that of a large, non-systemic bank holding company."[14] Thus, by definition, regulatory changes that reduce the systemic impact of a G-SIB's failure should reduce its G-SIB surcharge, but they do not. A company that holds sufficient TLAC to effectuate a SPOE strategy, agrees to the ISDA protocol, and increases its margin against uncleared swaps and security-based swaps – all measures that regulators have justifiably stated have materially decreased systemic risk – would incur the same G-SIB surcharge as one that did not.

Furthermore, the overstatement of the G-SIB surcharge also contains an implicit mandate: reduce the activities that add to the score, namely, capital markets activities. This mandate derives from the five factors that determine a G-SIB's surcharge under the binding U.S. standard:

- The *complexity* factor includes almost exclusively securities and derivatives assets held in market making;
- The *inter-connectedness* factor includes almost exclusively dealer-to-dealer trading assets held in order to hedge customer positions held in market making;
- The *cross-jurisdiction* factor includes almost exclusively cross-border dealer-to-dealer trading of the type captured by the interconnectedness factor;
- The *short-term wholesale funding* factor includes almost exclusively the funding of securities positions; and
- The *size* factor is not so exclusively focused on securities activities, but for the largest banks those assets constitute a large percentage of their total assets.

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13 *Id.* at 11.

14 Risk-Based Capital Guidelines: Implementation of Capital Requirements for Global Systemically Important Bank Holding Companies, Proposed Rule, Federal Reserve System, 79 Fed. Reg. 75473, 75475 (Dec. 18, 2014).

Thus, the only effective way for a firm to reduce its G-SIB surcharge is to reduce its market making and other activities that provide market liquidity and generally support capital markets.

iv. CCAR

The U.S. stress test is another important building block of the post-crisis banking regulations, and as noted above, we are in principle supportive of rigorous stress tests as a tool to assess the capital adequacy of large banks. At the same time, however, we have growing concerns about the Federal Reserve's CCAR exercise in practice, and in particular with the opacity with which the Federal Reserve designs its stress scenarios and then translates those scenarios into post-stress capital ratios.

The stakes here are significant. CCAR is becoming a binding constraint for most large banks, and thus has economic impacts. For example, by more severely stressing unemployment rate changes, the 2016 stress scenarios implicitly discourage small business lending and household lending, as these are the types of loans whose loss rates are most sensitive to increases in unemployment. Raising the exit post-stress minimum requirements would add to the discouragement.

One can think of CCAR as having three main components: (i) the stress scenario provided each year; (ii) the process by which the Federal Reserve decides how much each bank will lose, and thus how much capital it will have remaining, after undergoing that stress; and (iii) the minimum remaining amount of capital a bank must have left over after that stress.

First, while the Federal Reserve's own self-imposed standard states that the severely adverse scenario should consist of "a set of economic and financial conditions that reflect the conditions of post-war U.S. recessions,"[15] the 2016 stress scenarios assume a macroeconomic shock that is considerably more severe than the 2007-2009 financial crisis. In particular, the increase in the unemployment rate in the 2016 scenario is substantially more sudden than what was experienced during the 2007-2009 crisis, which is likely to cause credit losses to accumulate rapidly and in greater amounts over the stress period.

Second, in contrast to other jurisdictions, the Federal Reserve uses its own internal model(s) to estimate stressed credit losses and net revenues and provides virtually no detail regarding the specifications of these models.

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[15] *See* 12 C.F.R. part 252, Appendix A.4.

Third, banks are required to hold substantial amounts of capital post-crisis, and the Federal Reserve has said that it is considering even higher levels for some banks. These levels appear to presume an obligation for banks not only to remain safe and sound – and thereby survive a financial crisis – but to continue lending at a normal rate in the face of a crisis.[16] There is no basis in statute or history for such an obligation. Leaving that point aside, the CCAR post-stress capital levels are designed to reflect the capital that banks would need to operate and raise funding, but one would think that if a cataclysmic crisis of the type described in CCAR were to occur, large banks would have no trouble attracting deposits and other sources of funding, as it seems likely that under such circumstances, numerous small banks would fail, non-bank lenders would see their funding dry up and cease lending, and capital markets would be disrupted. It seems quite likely that G-SIBs with 4.5 percent common equity tier 1 will be a highly attractive credit in such a market. Thus, before raising post-crisis minimum requirements for large banks, we would encourage the Federal Reserve to analyze the impacts of a CCAR scenario on *other* market participants, bank and non-bank; analyze where that would leave large banks on a relative basis; and ponder what that means for the post-stress requirements.

CCAR also provides a useful example of a regulation that generally has been applied uniformly across a large range of banks with differing business models and risk profiles. As a result, and particularly in light of the immense operational and administrative burden that attends participation in CCAR, the various concerns I note are all the more pronounced for those banks with simpler balance sheets or smaller risk profiles, for whom the benefits of CCAR are likely to be significantly less in practice.

v. Countercyclical Capital Buffer

Perhaps the best example of a post-crisis capital requirement that would fail even the most basic cost-benefit analysis is the countercyclical capital buffer. The countercyclical capital buffer was developed by the Basel Committee and contemplates an additional capital requirement for larger U.S. banks of up to 2.5 percentage points so as to "protect the banking system from the systemic vulnerabilities that may build-up during periods of excessive credit growth."[17] The Federal Reserve has recently issued a proposed policy statement

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16 *See* Daniel K. Tarullo, *Stress Testing after Five Years* (June 25, 2014), *available at* www.federalreserve.gov/newsevents/speech/tarullo20140625a.htm (noting that the design of CCAR "serves the macroprudential goal of helping to ensure that the major financial firms remain sufficiently capitalized to support lending in a severe downturn")

17 78 Fed. Reg.at 62018 (Oct. 11, 2013) at 62038.

describing when and why it might impose this buffer.[18] That proposal has serious legal and procedural problems, but I will emphasize here its fundamental conceptual problems. This untested capital requirement is simultaneously both too broad and too narrow to be effective as a macroprudential tool to limit the build-up of risks in a credit bubble – too broad, because it would levy a hefty capital charge against all bank activities, not just the ones posing heightened risk, and too narrow, because it would do nothing to address any risks that arise *outside* of the banking system. Indeed, one can imagine that such a capital charge would only serve to accelerate the build-up of systemic risks by creating strong incentives for risk-taking to migrate outside the banking system. [19]

vi. Ring Fencing for Foreign Banks

Most of the post-crisis reforms have been applied, appropriately, to the U.S. operations of foreign banks. In some cases, however, foreign banks have received treatment that has unnecessarily and adversely affected their ability to assist U.S. customers. Specifically, foreign banks with significant U.S. operations have been required by the Federal Reserve (but *not* the Dodd-Frank Act) to ring-fence their U.S. non-branch assets and place them into a U.S. intermediate holding company (IHC). The proposed TLAC rule makes it very difficult to fund the IHC, and other rules have imposed duplication of back office functions.

Subjecting foreign banks to this U.S.-style of mandatory, *ex ante* ring-fencing has two principal shortcomings. First, to the extent that foreign banks manage their capital and liquidity on a consolidated basis, these banks retain and rely on the flexibility to shift financial resources within the organization to their location of highest and best use, including – most crucially – to a particular

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[18] *See* 81 Fed. Reg. 5661 (Feb. 3, 2016); 12 C.F.R. Part 217.

[19] These flaws are becoming an increasing focus of public discussion: for example, Federal Reserve Bank of Cleveland President Loretta Mester has publicly noted the shortcomings of the proposed countercyclical capital buffer approach in terms of both its unpredictability and uncoordinated nature.*See* Loretta J. Mester, *Five Points about Monetary Policy and Financial Stability* (June 4, 2016), *available at* www.clevelandfed.org/newsroom-and-events/speeches/sp-20160604-five-points.aspx (noting that "the need to coordinate countercyclical macroprudential policy actions across multiple regulators in the U.S. adds a complication to effectively using such tools in a timely way" and describing the need to "devise ways to make the macroprudential tools more systematic and less discretionary." Similarly, Office of Financial Research Director Richard Berner has noted that "[t]argeted policies with clear, direct effects on a financial stability threat … are preferable to general policies with diffuse effects (such as activating a countercyclical capital buffer)." Richard Berner, *Remarks at the Conference on the Interplay Between Financial Regulations, Resilience, and Growth* (June 16, 2016), *available at* www.financialresearch.gov/public-appearances/2016/06/16/conference-on-the-interplay-between-financial-regulations-resilliance-and-growth.

geographic or business operation in times of financial or market stress. Their ultimate strength resides in the ability to obtain support from the necessarily larger consolidated resources of the global enterprise. U.S.-style ring-fencing significantly undercuts this benefit and therefore could actually undermine financial stability.

Second, ring-fencing has an undesirable effect of layering multiple capital and liquidity requirements on banking organizations, thereby increasing the regulatory burden and complexity.

However, if U.S. policymakers continue down the current path, they should, at a minimum, abide by Congress's explicit direction in the Dodd-Frank Act to give due regard to the principle of national treatment and equality of competitive opportunity. They should also take into account the extent to which each FBO is subject on a consolidated basis to home country standards that are comparable to those applied to financial companies in the United States. In addition, we would urge policymakers to heed Congress's specific direction to take into account differences among financial institutions based on their systemic footprints and risk profiles.

b. Explicit & Implicit Liquidity Mandates

i. Living Wills

The living wills required under Title I of the Dodd-Frank Act are a key component of the core post-crisis regulatory framework addressing resolvability. One particular aspect of the regulatory guidance issued for the next set of resolution plans, however, appears to limit unnecessarily the ability of banks to engage in liquidity transformation, one of their core functions. As noted in a recent article by our head of research,[20] the guidance requires each material subsidiary to meet its peak potential funding on a standalone basis, without regard to the aggregate liquidity resources of an organization. As a result, for some banks, the living will guidance may be the binding determinant of the amount of liquidity transformation a bank performs. The potentially profound impact of these new policies on economic and job growth may be one reason why the GAO suggested that the agencies should be more transparent about the criteria they are applying when determining if the living wills are credible.

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[20] *See* William Nelson, AM. BANKER, *Living Wills: The Biggest Liquidity Rule of Them All* (May 24, 2016), *available at* www.americanbanker.com/bankthink/living-wills-the-biggest-liquidity-rule-of-them-all-1081150-1.html.

ii. LCR

The LCR is a core post-crisis reform that, while successful and effective as a general matter, has components that appear to be calibrated inaccurately, with substantial economic impacts.

The LCR treatment of liquidity commitments is an excellent example. For a commercial bank, these commitments represent a valued service to their business clients, particularly small businesses that do not have easy access to capital markets. These businesses are unlikely to draw these lines in times of financial crisis, as they use the funds for regular business and not as a source of liquidity. During the financial crisis, data shows that draws on these lines of credit were a maximum of 10 percent. Under the LCR, however, banks are forced to assume that 30 percent of these lines will be drawn.

The result under the LCR is that a bank must hold 30 cents of HQLA – basically, cash or a Treasury or agency security – against every dollar of commitment it offers a nonfinancial business. In other words, the bank must increase the size of its balance sheet, thereby drawing higher capital charges under the leverage ratio –which ignores the riskless nature of the HQLA. Here, the implicit mandate is to shrink or raise the price of lines of credit to U.S. businesses, making it more difficult for small businesses to grow.

A similar situation occurs with respect to custody banks, which offer lines of credit to their asset manager customers. Asset managers prefer these lines of credit to holding cash to fund possible redemptions; again, counterfactual outflow assumptions in the LCR have caused the banks to shrink (or increase the price of) these lines.

Furthermore, the U.S. banking agencies have applied the LCR (either in full or in some modified fashion) to all U.S. banks with $50 billion or more in consolidated assets, as well as to the U.S. intermediate holding companies of foreign banks that meet the LCR's definition of a "covered company." But that broad scope of application again ignores the wide heterogeneity across those banks – particularly in terms of funding models. While the LCR in full form may be appropriate for firms with complex market funding strategies, it is often likely to be unnecessarily onerous, and not particularly beneficial for firms that are predominantly reliant on deposit funding.

c. Additional Reforms Pending

Given the extraordinary stringency and complexity of post-crisis regulation, it is somewhat surprising that the pace of regulatory change continues at a high, and continuously more burdensome level.

i. Basel IV Changes to Capital Regulation

Basel IV is an ongoing effort by the Basel Committee to reduce reliance on bank models in setting capital requirements. It has two components: (i) imposing floors on the amount of required capital that can be calculated using bank internal-ratings based (IRB) approaches; and (ii) the development (or redevelopment) of government-devised standardized measures of capital as an alternative to bank models. Basel IV has not been presented for debate in the U.S., even though it is being finalized on an international basis. The Clearing House believes that there are compelling reasons for the United States to opt out of any changes agreed to as part of Basel IV.

Basel III set global banking capital standards at a high level, and the U.S. regulators have consistently made them still higher for U.S. banks. In undertaking Basel IV, the Basel Committee consistently emphasized that the purpose of the exercise was to prevent inconsistent outcomes in bank models, not to increase overall capital from their Basel III levels. The problem is that in every case, the standardized models proposed by the Basel Committee would require dramatically more capital than the levels agreed to in Basel III. Of course, higher capital requirements could be appropriate if the simplified, standardized models were more accurate. But they are not more accurate, and they come with a host of other risks.

It is easy to understand why internal bank risk models have been disdained after a financial crisis that revealed serious errors in bank risk management; furthermore, there is a strong perception that some banks have underweighted the risk of some assets in order to lower their capital requirements post-crisis. But there appear to be multiple reasons to be still more skeptical of uniform, government-devised regulatory risk assessments. Make no mistake, these are "models" in the same sense as the bank models they would replace; and they similarly provide formulas for assessing risk and assign a corresponding capital charge. By design, they do so using simplified approaches that ignore important differences in the risk among assets. For example, a recent Basel Committee proposal on credit risk suggested that there is insufficient data to model loss rates on credit cards or large corporate loans, and therefore proposed to subject them to uniform floors implying an equal probability of default. Also, these standardized models are one-size-fits-all, assuming the risks are the same for all banks in all

markets in all countries; they are also as a practical matter incapable of adjustment as risk changes.

As regulatory requirements – and in particular, capital and liquidity requirements – become increasingly stringent and granular, they run the risk of creating such powerful allocative incentives that they effectively drive capital allocations. There are serious concerns with such an arrangement. First, markets generally are more efficient in evaluating financial risk than governments, and in any event are quicker to react to changes in risk. Second, government mandated outcomes tend to *herd* risk and thereby create concentrations.

Consider this question: *Has there ever been a systemic crisis as a result of one bank, or even a small number of banks, taking an idiosyncratic view of risk?* The most recent financial crisis is clear demonstration of the alternative case: banks, non-banks, government-sponsored agencies, and ratings agencies (and regulators) generally taking a consistently erroneous view of the risks of default on mortgages, a money market mutual fund "breaking the buck," a run on short-funded investment banks, and others. Crisis came when all came to recognize their common misperception. Similarly, the U.S. thrift crisis in the 1980s involved thousands of banks and thrifts taking a common view of real estate lending. Indeed, thrifts were required by regulation to hold a specified – one might say, standardized – percentage of their assets in mortgage loans. Thus, if one were asked to choose from a systemic, "macroprudential" perspective between regulators having as their imperative (i) ensuring all banks allocate their capital based on the *same* view of the risk of each asset, or (ii) ensuring that all banks allocate their capital based on *different* views of the risk of each asset, history would appear to argue for the latter.

This debate is certainly not unique to banking. Aircraft safety, health safety and national security are all vitally important, but we continue to let private sector firms design airplanes, pharmaceuticals, and ballistic missiles – subject to governmental testing and oversight.

It is also important to emphasize that the United States is unique in its approach to capital regulation, and least in need of a Basel IV. The CCAR process has clearly been identified as the Federal Reserve's primary tool for ensuring capital adequacy. The Collins Amendment has already established a mandatory standardized floor on capital requirements in the United States (and only in the United States). Furthermore, U.S. banks are now required to invest heavily in model development, employ an independent second line of defense to review the models, and a third line of defense (audit) to review as well; all models that feed CCAR or financials (and many that don't) are subject to prior review and approval

by the Federal Reserve or the OCC. Most other Basel countries have few if any of these safeguards.

The potential outcome of Basel IV could be significantly more perverse, however, if one considers that European and other banks subject to Basel IV will in fact *not* end up using the Basel IV standardized approaches but rather the alternative internal-ratings based (IRB) approach developed in Basel II. At that point, because CCAR uses standardized approaches, the U.S. banks could be the *only* banks implementing the Basel IV standardized approaches, and the only banks to see a potentially massive and unjustified increase in capital requirements.

ii. NSFR

The Clearing House is deeply skeptical that the Net Stable Funding Ratio (NSFR) liquidity requirement, which the banking agencies recently proposed, has benefits that exceed its likely costs. The NSFR is intended to measure banks' liquidity risk at a longer horizon than the LCR. The NSFR is defined as the ratio of "available stable funding" ("sticky" liabilities that are unlikely to run) to "required stable funding," (assets that are illiquid and cannot be readily sold to fund a run).

The NSFR is particularly concerning because it was developed by the Basel Committee without a completely transparent public review and comment process. A preliminary version of the NSFR was released by the Basel Committee for comment in January 2014; nine months later, the Committee published a final version of the NSFR that included significant new elements that were never subject to public comment. Even today, nearly two years later after publication of the final framework, it remains unclear what, if any, data analysis supports many of the calibrations selected by the Basel Committee in the NSFR. This lack of transparency and empirical justification is the foundation of the current rulemaking that the banking agencies proposed in early May.

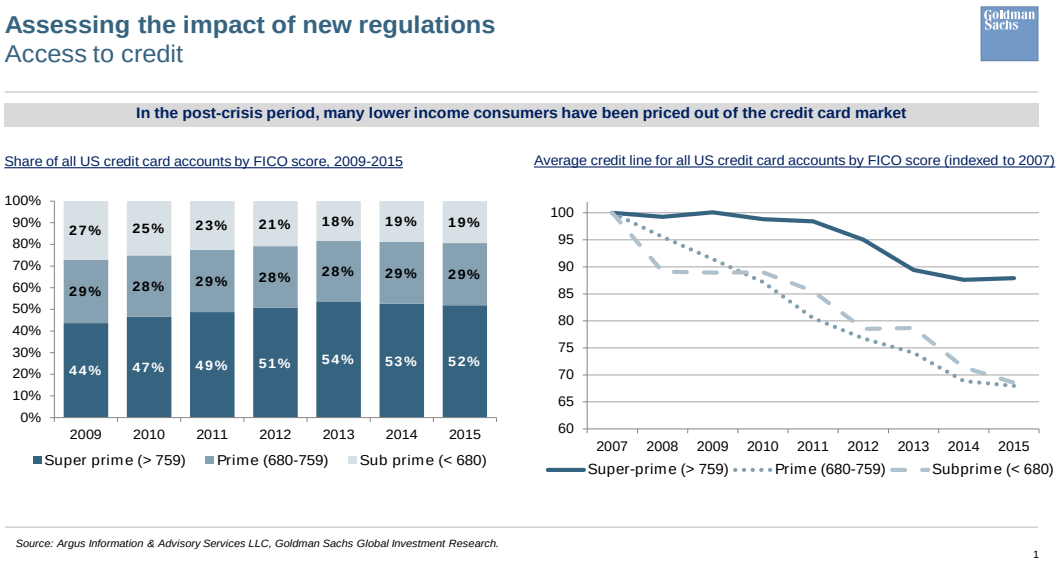
As a forthcoming TCH research note will demonstrate, once the level of interest rates and the size of the Federal Reserve's balance sheet normalize, banks will likely need to make substantial changes to their future balance sheets to comply with the proposed NSFR, likely at least in part by reducing, or charging much more for, activities for which the NSFR requires a high level of stable funding: primarily, lending to households and nonfinancial businesses, including small businesses. Because the regulation requires banks to hold stable funding against short-term lending to other financial institutions, it seems likely to also add further to the degradation in financial market liquidity that has been observed in recent quarters.

III. General Concerns

As the foregoing suggests, a significant redistribution of risk is occurring in our financial system, driven in part by post-crisis regulation. Risk taking in the regulated banking sector has been significantly reduced, even as banks' capacity for risk taking – as evidenced by much higher capital and liquidity levels – has increased substantially. In some cases, those risks are not being taken (*e.g.*, certain loans are not being made), leading to slower economic growth. In other cases, those risks are being taken by non-banks that are less regulated, less supervised, and less capitalized. Conversely, at the same time that certain higher-risk activities are being pushed out of the banking system, regulation is also driving banks out of the *lowest* risk assets and activities, which no longer make economic sense for many firms. As we evaluate both these regulatory causes and their practical effects on the new financial risk environment being created, there are several emerging, more general concerns that appear to warrant greater attention, each of which is described below.

a. Impact on Commercial Banking

For commercial banks, regulation is having significant effects on the extent to which banks can intermediate between savers and borrowers. Capital and liquidity rules are shrinking credit availability, particularly to small businesses (which cannot access capital markets and must rely on bank loans) and low to moderate income consumers. As an example, consider trends in credit card lending:



For individuals and sole proprietorships, credit card loans can be an important source of funding – and a lower cost source of funding than non-bank alternatives. Clearly, the availability of credit card loans for those with credit scores below super-prime has decreased significantly. Some reduction was natural and appropriate given crisis experience; the question is whether the pendulum has swung too far.

As another example, there is certainly a benefit to their safety and soundness from rules that require the largest banks holding to hold approximately 30 percent of their assets in cash and cash equivalents. But there are also certainly meaningful economic costs, as these are funds that cannot be lent to businesses or individuals. Moving to the standardized approach, a recent TCH study finds that banks subject to the Advanced Approaches would have to reduce about 15 percent of all loan commitments to offset the increase in capital requirements for off-balance sheet exposures proposed under Basel IV.[21]

To a large extent, the effect of a reduced role for banks in financial intermediation depends on the extent to which non-banks can serve as a substitute. There are reasons to be skeptical as we look to the capacity of nonbanks to fulfill that role both in ordinary times and in times of crisis.

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21 See "Empirical Analysis of BCBS-Proposed Revisions to the Standardized Approach for Credit Risk," The Clearing House, May 2016. *Available at* https://www.theclearinghouse.org/issues/articles/2016/05/20160520-tch-analyzes-bcbs-revisions-to-the-standardized-approach-to-credit-risk

First, even in good times, bank alternatives tend to be quite expensive. Whether in consumer (payday lenders, finance companies) or small business lending (online lenders), prices charged to consumers and businesses are extremely high. Indeed, as reported in a recent small businesses survey, borrowers are generally dissatisfied with online lenders, mainly due to high interest rates.[22] According to a recent study, many alternative lending platforms charge yields ranging between 30 and 120 percent on the value of the loan, depending on several loan characteristics.[23] In contrast, yields on loans funded by commercial banks range between 5 to 7 percent.

This higher cost pricing should not come as a surprise. Not only do banks have access to lower cost and more durable funding, they also generally have an informational advantage when it comes to lending. If they bank the borrower, they see cash flows over time, and are thus better able to gauge risk.

Second, one might well presume that in the event of economic trouble, these non-banks will see their own cost of funding increase markedly, as they would not have access to insured deposits and are generally of insufficient scale to access capital markets. Moreover, they will need this access just as their assets are declining in value, and are opaque to investors. Thus, one could well see the effects of a future recession amplified by the withdrawal of non-bank lenders from the playing field, much as we saw systemic problems arise from the failure of non-banks in the financial crisis.

b. Capital Markets

Capital and liquidity regulation have significantly affected capital markets activity. Somewhat surprisingly, the impact comes not only from the regulatory treatment of risk assets but also from the regulatory treatment of low-risk assets like cash and U.S. Treasuries, and ultimately the repo markets. Dealers find it more expensive to hold inventory and thereby provide market liquidity, because of the associated funding costs. Dealers find it even more difficult to serve clients who themselves provide market liquidity, because those clients fund purchases by pledging low-risk assets to the dealer, which regulations discourage the dealer

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22 *See* Federal Reserve Banks of New York, Atlanta, Boston, Cleveland, Philadelphia, Richmond, St. Louis, 2015 Small Business Credit Survey (March 2016).

23 *See* Mills, Karen and Brayden McCarthy, *The State of Small Business Lending: Credit Access during the Recovery and How Technology May Change the Game* (July 22, 2014), *available at* http://www.hbs.edu/faculty/Publication%20Files/15-004_09b1bf8b-eb2a-4e63-9c4e-0374f770856f.pdf.

from holding. Thus, regulation is not only preventing trading banks from playing their traditional role as market intermediary, but also preventing them from funding other market participants that wish to trade and play a similar role.

Custodial banks provide the operating cash management accounts for investment funds and other institutional investors and are finding it increasingly challenging to accept certain cash deposits from customers. Current and future regulatory focus on this essentially riskless activity, potentially impeding custody banks' ability to provide traditional custody services, could have an adverse impact on financial stability by preventing custody banks from being able to accept cash deposits from their clients during a crisis, denying those clients a safe haven to preserve their capital and potentially worsening a run on the banking system.

Of course, overreliance on short-term wholesale funding was a major cause of the financial crisis, and post-crisis regulation had as a justifiable goal reducing such reliance. As always, the question is whether the marginal benefits of additional reductions are worth their marginal costs. In other words, at this point, is there greater concern that a large bank will fail because of an inability of its securities affiliate to roll over debt, or that financial markets have changed from a principal-based system (where dealers use their capital to make markets), to a more brittle, agency-based system (where dealers only match buyers and sellers), which will be much less resilient and systemically sound in crisis, and reduce the value of corporate debt in steady state? It is not clear that the U.S. regulatory community has meaningfully posed this question, let alone answered it. (There appears to be more appetite for inquiry in Europe, where the European Commission has recently completed a call for evidence on the effects of financial regulation on economic growth.)

Further mandates that will diminish market liquidity are on the horizon. Most pertinent here are the Basel Committee's Fundamental Review of the Trading Book, which will substantially increase the capital costs of trading activities, the NSFR, which will further penalize repo market and similar activities, and the potential incorporation of the G-SIB surcharge into CCAR, discussed above. Similarly, while not a capital or liquidity rule for discussion today, the Volcker Rule has the potential to further chill principal-at-risk market making, particularly in a market stress where it is most needed

In the meantime, bank dealers have already seen more than enough regulatory disincentives, and many are exiting businesses. Dealer inventory is shrinking, trade sizes are getting smaller, and trading is clustering in on-the-run issuance by only the largest companies, where liquidity is to be found. And this is leading small and midsize firms to issue less corporate debt, even as large firms are issuing more. An increase in the yields that corporate borrowers must pay

(because their bonds are less liquid) is already evident, though to some extent camouflaged by historically low interest rates.

In sum, regulation is significantly reducing the ability of banks and their affiliates to intermediate in financial markets. Increasingly, intermediation is being conducted through algorithmic or high frequency trading, but the speed of trading is not a substitute for putting capital to work. Such traders also do not have a client model. Thus, they have neither the resources nor the incentive to take on large trades at a time of stress, but rather will seek to match buy and sell orders in smaller amounts. As a result, volatility is likely to increase, and market inflation and sell-offs could be longer-lasting and more severe than they would have been in the past. Issuers may be temporarily prevented from issuing debt or equity, or may have to bear substantially higher issuing costs. Increased volatility also drives up the cost of derivatives used for hedging, which directly reduces overseas investors' appetite due to reduced local currency return on their investment.

Thus, when the next economic or financial crisis comes, there is reason for concern that large banks will become a systemic Maginot Line, extremely well-fortified, all but certain to remain intact, but playing little useful role in battling systemic risk.[24] We do not know what geopolitical shock or asset bubble will cause such a crisis, but the chances of its first victims being banks with three times the capital they held before the last crisis, and with much of their assets held in cash or U.S. Treasuries, appear extremely low. Rather, a shadow lending system that is undiversified, market-funded, and unsupervised would seem to be a more likely source of flagration and accelerant. And as crisis unfolds, we may see a combination of rules lead to financial markets suffering as banks not only play a much smaller role in providing market liquidity but also as a refuge for investors and depositors seeking safety.

In short, the current priority should not be reinforcing the Maginot Line, but rather exploring other sources of risk outside its borders.

c. Supervisory Control of Routine Bank Management Decisions

While the focus of today's hearing is capital and liquidity regulation, it should be noted that the highly prescriptive and detailed regulation of banks' balance sheets has been matched by an equally extensive, albeit much less transparent, series of regulatory and supervisory interventions into the governance and day-to-day operation and management of banks. The basic business of

[24] As a historical note, the southern terminus of the Maginot Line was in Basel.

running a bank is increasingly being subject to the opaque but binding dictates of individual supervisors and examiners. While one might assume that high capital and liquidity levels reduce the need for regulatory involvement in banks decisions on new product development and risk management, the opposite is occurring. While impossible to quantify, the economic effects here may be as great as in the capital and liquidity arena – particularly for smaller banks. Although the increasing involvement of supervisors and examiners in even the most routine governance and management matters is taken as fact in the industry, it is difficult to engage in public debate regarding this problem, as the majority of interactions are shrouded in the regulators assertion of the protections afforded "confidential supervisory information."

Recent experience with the supervision of so-called leveraged lending is a good example, as the effects on loan and economic growth here could be just as large as if a capital surcharge had been imposed. Leveraged loans are made to companies that carry a lot of debt and therefore represent a greater repayment risk, albeit one that banks have experience managing. Such companies also are frequently growing companies. Beginning in 2013, the banking regulators have issued a series of public guidance and "Frequently Asked Questions" documents that while styled as "supervisory expectations," have made clear that banks must substantially restrict lending to such borrowers. It appears that this guidance has been supplemented by further direction from examiners to banks that has had the effect of further limiting lending activities in the area – though I am unable to speak to any of those details as they are deemed by the agencies to be "confidential supervisory information," and therefore are immune to public scrutiny.

This continuing episode raises a series of questions. First, has the guidance constrained the perceived risk? Although the agencies' efforts in this area were motivated by concerns that leveraged lending activities could "heighten risk in the banking system or the broader financial system through the origination and distribution of poorly underwritten and low-quality loans," it is already becoming apparent that a bank-centric approach is simply shifting risk rather than limiting it. For example, recent research by a team of Federal Reserve Bank of New York economists illustrates that the guidance has had the effect of reducing bank activity in this area, but *increasing* nonbank activities.[25] Indeed, one academic has

[25] *See* Sooji Kim, Matthew Plosser & João Santos, *Did the Supervisory Guidance on Leveraged Lending Work?* (May 16, 2016), *available at* www.libertystreeteconomics.newyorkfed.org/2016/05/did-the-supervisory-guidance-on-leveraged-lending-work.html#.V2f_Jk32Z9M.

rather aptly described this as "like a game of Whac-a-Mole, with new unregulated players popping up to fill the gaps."[26]

Second, were the regulators prescient in identifying a bubble in leveraged finance, and interceding to limit its supply to borrowers? While more research is warranted, it appears that leverage loans have continued to perform well, outside of the area of metals, mining, oil and gas – where loans of all types have performed poorly. (The March 2013 guidance did not identify that sector as particularly problematic.) Thus, one effect may have been to raise the cost and reduce the availability of bank credit across other sectors unnecessarily.

Third, how did the agencies decide which borrowers' access to credit would be restricted? The recent FAQs have required banks, in evaluating whether a company is leveraged for purpose of the new restrictions, to assume that all lines of credit are drawn, and ignore cash held by the company (and presume that the cash is not invested productively). This definition has led to high-credit-quality companies being labeled "leveraged" and thus subjected to special limits. What analysis did the regulators undertake to determine that markets, rating agencies, and lenders were underestimating the risk of these companies?

As Congress conducts oversight in the area of prudential bank regulation, this may therefore be a good case study for further transparency and analysis. It may also argue for the regulators providing notice and seeking public input before launching future such initiatives.

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The Clearing House believes that (i) there are a set of core post-crisis reforms that have made our banking system substantially more resilient and our largest banks resolvable; and (ii) there is a limited set of regulatory changes that could be revised or deferred that would leave core reforms largely untouched, meaningfully improve loan growth and financial market liquidity, promote financial stability, and do nothing to decrease the resiliency or resolvability of banks.

Thank you for the opportunity to testify before the Committee today. I look forward to answering your questions.

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[26] Steven Davidoff Solomon, N.Y. TIMES, *Obstacles in Regulators' Push to Reduce Leveraged Loans* (July 7, 2015), *available at* www.nytimes.com/2015/07/08/business/dealbook/balancing-act-for-regulators-seeking-to-curb-leveraged-loans.html?_r=0.