The Bank Policy Institute

Testimony before the Financial Institutions and Consumer Credit Subcommittee of the House Financial Services Committee

Examining Capital Regimes for Financial Institution

July 17, 2018

Chairman Luetkemeyer, Ranking Member Clay, my name is Greg Baer, and I am the CEO of the Bank Policy Institute. It is a pleasure to appear before you today.

At the outset, I should note that today is my first testimony on behalf of BPI, a product of the combination of the former Clearing House Association and Financial Services Roundtable. We will conduct research and advocacy on behalf of America's leading banks, which we believe will also serve the interests of bank customers: consumers who desire innovative products at competitive prices, and businesses who seek funding for their growth. Our focus will be prudential regulation of banking, and how it affects not only safety and soundness and financial stability but also innovation and credit availability. The stakes are high, as our members make 72% of all loans and 44% of the nation's small business loans.

Turning to the subject of today's hearing, capital requirements are both very important and very difficult to design and calibrate. We approach the subject with humility, and empathy for regulators charged with a complex mission. The current capital regime has some clear attributes but also some fundamental and important flaws.

In the first section of my testimony, I will review current bank capital levels and try to give a sense of just how high they are. In the second section, I will describe three general problems with current requirements: (i) they require banks to hold too much capital; (ii) they are volatile, and for no good reason; and (iii) they allocate credit in a way that is very real but that regulators have been reluctant to acknowledge. In the third section, I will describe how these concerns can be reduced through specific regulatory reforms.

I. CURRENT CAPITALIZATION OF THE BANKING SYSTEM

A. Capital

U.S. banks now hold substantial amounts of high-quality capital. Since the global financial crisis, the aggregate tier 1 common equity ratio of BPI's 48 member banks has more than doubled to 12.1 percent at the end of last year. In dollar terms, that is an increase in tier 1 common equity from nearly $400 billion to almost $1.2 trillion.

We now take for granted two of the most important post-crisis reforms. First, capital requirements now focus heavily on common equity rather than hybrid capital instruments that did not prove sufficiently loss absorbing in crisis. Second, off-balance-sheet exposures are now much better captured and capitalized. One could argue that these two changes alone would have been sufficient to prevent a recurrence of the stress on the banking system seen in the last financial crisis. Obviously, regulators did not stop there.

B. Total Loss Absorbency: Long Term Debt as Bail-in/Gone Concern Capital

During the financial crisis, we learned a valuable lesson about what types of non-deposit liabilities absorbed loss before shareholders, and what types did not. This lesson was especially important with respect to the largest institutions the failure of which could pose risks to the larger financial system – so-called global systemically important banks, or GSIBs. Legally, debt issued to the market by GSIBs took losses before the deposit insurance fund. In the event, however, regulators recognized that much of that debt was short-term debt, and that imposing losses on it would create major systemic risk, because short-term debt holders, including corporate uninsured depositors, would run at the first hint of trouble – and not only from a firm experiencing trouble, but also other firms. Those firms would then be required to sell assets to fund the run, causing a further depreciation in asset values. So, in many cases, GSIB debt holders were protected against loss. Note that this included long-term debt holders; while by definition they could not run, because their debt was not maturing, resolution authorities were legally prohibited from discriminating against one class of debt holders (long-term) to favor another (short-term). So, it was bail out all or none.

Perhaps the greatest untold story in post-crisis regulatory reform is a regulatory solution to this problem.[1] On one level, the solution was remarkably simple: effectively ban GSIBs from issuing short-term debt. (There was also a very large amount of legal work done (including some by me) to determine the tenor and terms of that debt to ensure its loss absorbency; regulators also sensibly limited each large bank's ability to hold long-term debt of another, to prevent one firm's failure from spreading.) So, with long-term creditors unable to run, and no legal issues about differential treatment of creditors, long-term debt is now fully absorbent in a bankruptcy or resolution. It absorbs loss only once the firm has failed – or, under bank living wills, is close to failing. But at that point, it unambiguously takes losses before other types of liabilities, most notably federally insured deposits held at any of the GSIB's bank subsidiaries. It is now frequently and aptly described as "gone concern" capital, and markets and rating agencies appropriately treat it as carrying substantial risk. While equity will always be a preferred source of loss absorbency from a regulatory perspective, because it keeps the firm afloat, long-term debt now protects taxpayers to an equal extent.

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[1] *See* Oliver Ireland, Anna Pinedo, and Jeremy Jennings-Mares, *The Resurgence of Debt as Capital, Banking Perspectives* (1Q2018), *available at* www.theclearinghouse.org/banking-perspectives/2018/2018-q1-banking-perspectives/articles/resurgence-of-debt-capital.

So, when one combines capital and long-term debt at the holding company level, one gets a firm's total loss absorbing capacity – better known in the regulatory area as TLAC.

C. The Unseen Connection: Liquidity

The focus of this hearing is capital, and regulators generally treat capital and liquidity like church and state. They are, however, interrelated: a liquid bank requires less capital (and an illiquid bank, more), and a well-capitalized bank requires less liquidity (and an undercapitalized bank, more). As our research team recently wrote, "[a]s a result of the introduction of Basel III liquidity requirements, large banks hold a sizable stock of liquid assets that can be easily liquidated if a financial crisis (and resulting run of liabilities) were to occur. These large stockpiles of highly liquid assets make fire sales of illiquid assets much less likely to occur, thereby decreasing the potential magnitude of a large bank's losses during a crisis and the probability of the bank's failure."[2]

The link of liquidity to capital is especially strong with respect to capital ostensibly directed to systemic risk (the so-called GSIB surcharge). In recent research, we take the methodology used by the Federal Reserve in setting that surcharge, specifically the historical return on risk-weighted assets, and adjust for the impact of current liquidity requirements. Intuitively, had banks been subject to liquidity requirements during past financial crises, banks would have been able to sell those liquid assets during the stress period, thereby reducing the likelihood of fire sales of less liquid assets and the size of their resulting losses. Our findings indicate that the favorable impact of liquidity requirements on bank losses lead to approximately a 25 percent haircut on the GSIB surcharge; put another way, the GSIB surcharge is now requiring affected banks to hold approximately 50-100 basis points more capital than its own ostensible goal would require.[3]

D. Perspective on Current Capital Levels: CCAR 2018

We will discuss its benefits and costs later, but for now it is worth identifying CCAR as a good barometer for just how much capital the largest 18 banks are carrying in 2018. (BPI members that are not among the top 18 banks in CCAR have *even higher* common equity Tier 1 capital ratios.)

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[2] *See* Francisco Covas, Bill Nelson, and Robert Lindgren, *Estimating the LCR Haircut to the GSIB Surcharge* (Jun. 13, 2018), *available at* https://bpi.com/estimating-the-lcr-haircut-to-the-gsib-surcharge/.

[3] These results are obtained under the assumption that banks are subject to a 100 percent LCR requirement, and thus understate the impact, as all GSIBs maintain an LCR well over 100 percent in practice

This year's stress tests featured a downturn in the U.S. economy significantly more severe than the 2007-2009 financial crisis. The scenario included a sudden increase in the unemployment rate of 600 basis points and a stock market crash of 65 percent; housing prices plunged 30 percent; a global market shock of similarly dramatic proportions simultaneously hit firms with a capital markets business; and operational risk losses occurred as well. Using the confidence interval the Federal Reserve provides around its own quarterly projections, we calculate that such a rapid increase in the unemployment rate – let alone the simultaneous deterioration of all the other variables – has only about a fifty-fifty chance of occurring once in 10,000 years.[4]

And yet, in this year's CCAR exercise, all but three banks would have weathered this financial apocalypse and still held more than a 4 percent ratio of Tier 1 capital to total assets. Three institutions that failed to meet that requirement ended up at 3.4, 3.5 and 3.9 percent.

One might think that failing CCAR meant suffering a loss large enough that it would require taxpayer assistance. It absolutely does *not* mean that, not even close. One could think that it meant suffering a loss large enough to make the bank insolvent, imposing losses on equity holders (but not debt holders and, of course, therefore not the deposit insurance fund). Again, no, not even close. As the Federal Reserve has structured the test, failing means that after a dramatic increase in unemployment, plunge in housing prices, and market crash, the bank does not have enough capital to remain over the relevant thresholds: in other words, enough capital to continue lending as if nothing much had happened.

In the auto world, it would mean requiring sufficiently large bumpers such that a 60 mile per hour crash would not only keep the passengers alive, not only keep them unharmed, but also would have no effect on the car.

As a benchmark, consider the loss absorbency currently held by the largest banks shown in the following chart. Specifically, the 18 largest banks in CCAR hold more than $1 trillion in tangible common equity. Under the Federal Reserve's severely adverse scenario, projected net losses before tax for the 35 banks that participated in CCAR 2018 were $139 billion. Thus, collectively, the largest 18 banks in the 2018 CCAR exercise could have taken all the losses of the apocalyptic scenario and still suffered an additional *$870 billion* in losses prior to being insolvent.

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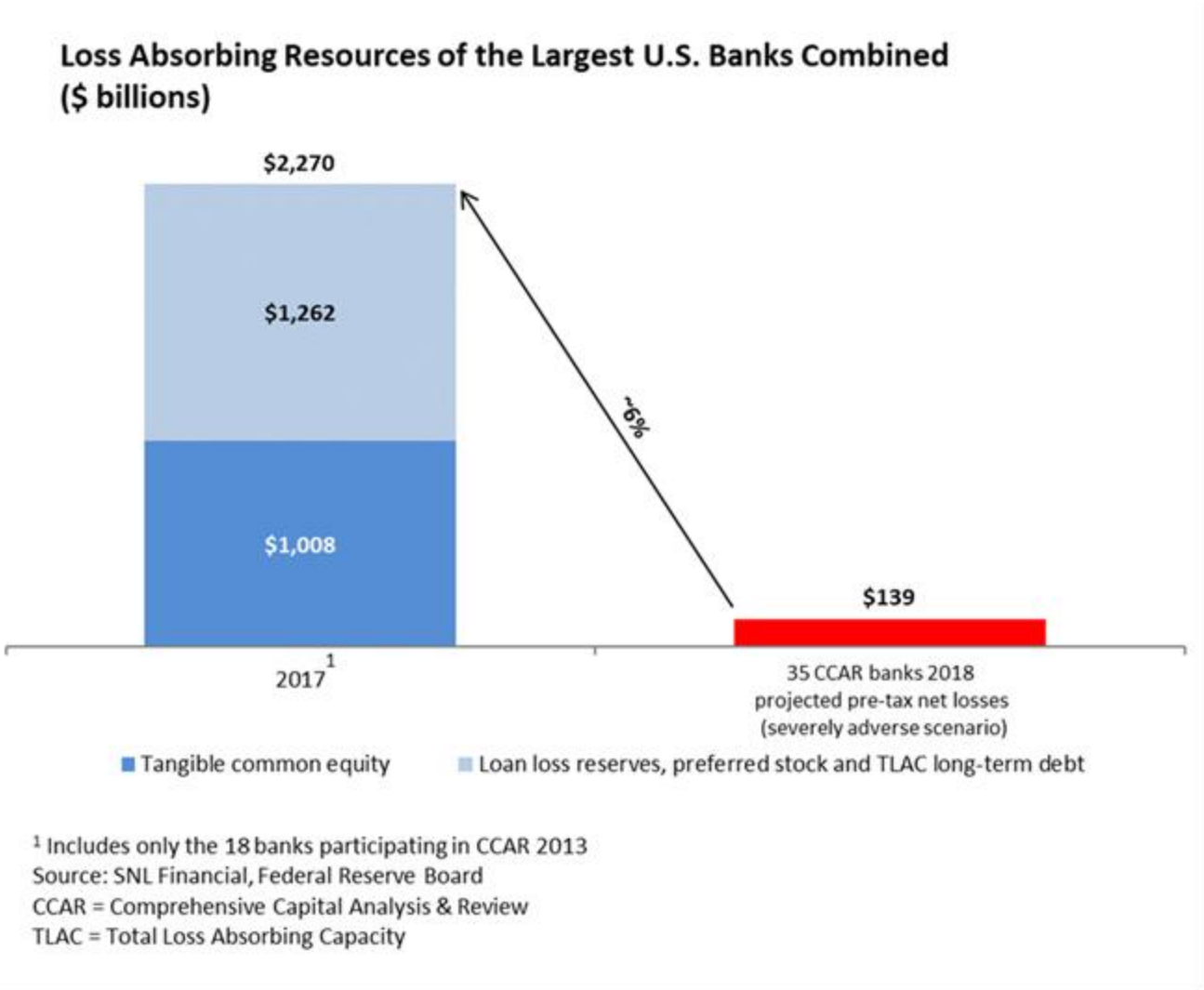
[4] *See* Francisco Covas and Bill Nelson, *Cracks in the Fed's stress tests* (Mar. 2, 2018), *available at* https://bpi.com/cracks-in-the-feds-stress-tests/.



Even then, under post-crisis rules, the deposit insurance fund would not be tapped. Rather, debt holders of the bank holding company would be "bailed in" to absorb loss. Collectively, the 18 CCAR banks hold $1.05 trillion in TLAC. So, collectively, after this unprecedented stress event, taxpayers would still be *$2.13 trillion* in losses away from having the deposit insurance fund reimburse a depositor, as the amount of projected net losses in CCAR accounts for approximately 6 percent of the aggregate amount of loss absorbing resources of the largest 18 banks. Put another way, the 18 largest banks are currently capitalized sufficiently to suffer the losses of a financial crisis substantially worse than the last one, and still be prepared to lose more than an additional $2 trillion prior to the FDIC paying out an insured depositor. (And larger banks not among that group hold even higher levels of capital relative to risk-weighted assets.)

E. The "Records Profits" Canard

One sees little analysis based on any absolute or historical standard that argues that U.S. banks are undercapitalized, or not overcapitalized. The most frequent argument – if it could be called that – that we hear is that large banks are making "record profits" and therefore should have higher capital requirements, or at the very least not object their current levels.

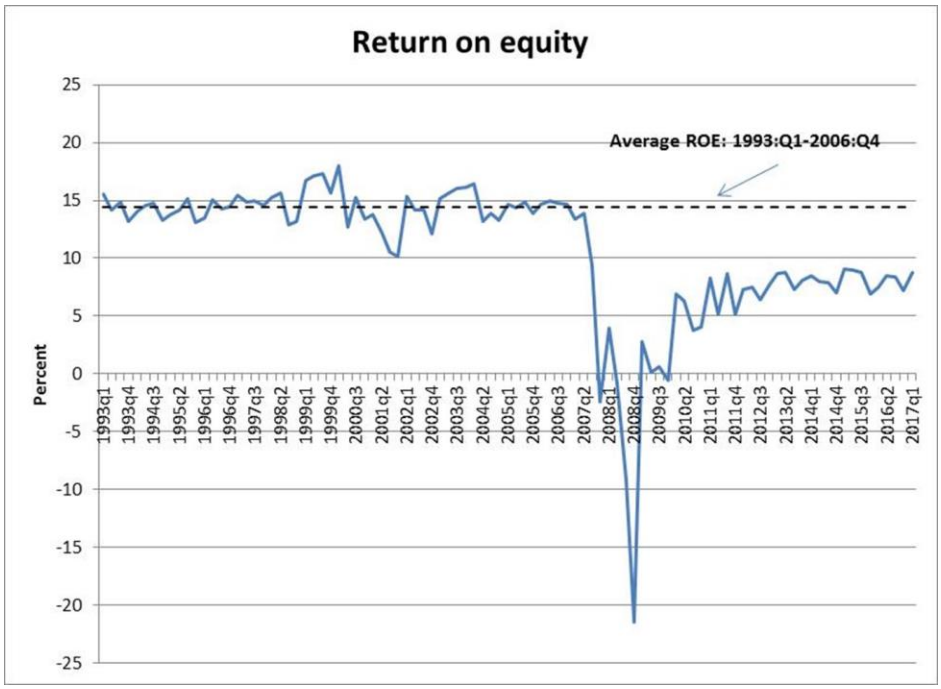
Just for starters, step back and think just how counterintuitive the "record profit" canard really is. Suppose the government adopted a rule that every power plant had to be painted yellow, or that every car had to have a bumper on the roof, or that every restaurant had to include a pet bathroom. All of those would be really dumb regulations, but all of those industries would remain profitable. Indeed, they might even report "record profits" after those regulations were promulgated. Does that mean that those regulations would then be vindicated, and constitute smart regulations?

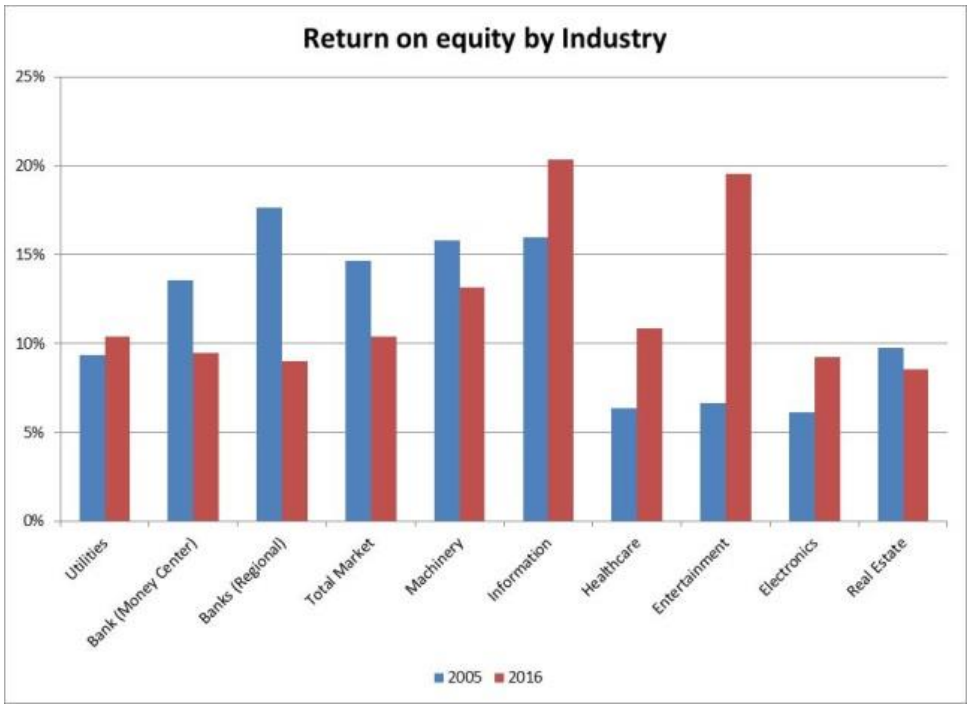
Of course, the converse is also true: if an industry were suffering record losses, that fact would not necessarily suggest that smart regulations should be relaxed.

But with more particularity, let's consider four more specific problems with the "record profits" canard.

First, "profits" is an odd and misleading metric to evaluate the health of an industry. After years of economic growth and some inflation, almost every U.S. industry is earning "record profits." (Hyperinflation would be a wonderful recipe for record profits.) However, no investor or analyst decides whether to invest in a company based simply on its profits. They generally look at return on equity (ROE) and related measures, both on an absolute and relative basis. So, "profits" tell us little about how attractive an industry is for investment purposes.

So what has happened to banks' ROEs? (Note these charts do not reflect the impact of 2018 tax reform.)





Thus, we see that bank ROEs remain below historical averages, and about average with respect to other industries.

Second, this argument implicitly suggests that profits are a bad thing for an industry to earn, and merit heightened regulation to reduce them. That is a very strange idea.

Third, the largest profit center for almost all banks is lending. Give or take, the more loans banks make, the more money they make. So, when banks are making more money on lending, that generally means that more people are getting loans. Those arguing that current profits are satisfactory are effectively saying that loan availability is sufficient, and that borrowers should be satisfied. That, apparently, is not currently true. According to the Fed's small business credit conditions survey, 61 percent of startups (small businesses with 5 years or less) reported not having their borrowing needs satisfied.[5]

Fourth, the profits argument elides an important question: how do *particular* regulations affect the profits (really, ROE) of *particular* bank businesses? More on this later, but as our previous research indicates, banks are enhancing profit by shifting assets out of certain activities that draw the largest capital charges in relation to true economic risk – for example, small business lending, mortgage lending, and market-making.[6] Instead, they are investing in less capital intense businesses, like asset management, including private wealth management. Is that a reason to feel sanguine about current levels of regulation?

F. The Nature of Buybacks

Relatedly, it has been puzzling in this CCAR cycle to see large banks criticized by some for paying dividends or making share repurchases. As demonstrated, that capital is not needed to meet any regulatory capital requirement, and thus is not serving any safety and soundness or financial stability purpose. When a company – whether bank or bakery – cannot earn a return on its capital in line with its ROE target and its shareholders' expectations, it returns capital to its shareholders, who then redeploy it in a higher and better use. An institutional investor might invest in another bank or another industry. An individual might reinvest as well, or use the money to buy a home or pay a bill.

One could say that the government should require banks to retain the capital, impose a significantly lower return to their shareholders, and just allow their share prices to drop. Of course, one could say the same of pharmaceutical companies – who could invest more in drug research – or tech companies – who could develop new products. The core concept of capitalism, however, is that capital should flow to companies that can offer the highest return. For that reason, the government today has not nationalized any of these sectors, dictating the returns their shareholders can receive. And wisely so.

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[5] Federal Reserve Banks, *Small Business Credit Survey: Report on Employer Firms* (2017), *available at* www.fedsmallbusiness.org/medialibrary/fedsmallbusiness/files/2018/sbcs-employer-firms-report.pdf.

[6] *See* Francisco Covas, *The Capital Allocation Inherent in the Federal Reserve's Capital Stress Test* (January 2017), *available at* http://pushbpi.wpengine.com/wp-content/uploads/2018/07/20170130_tch_research_note_implicit_risk_weights_in_ccar-final-4.pdf.

It is also worth noting, with considerable irony, that CCAR 2018 actually represented a substantial *increase* in bank capital requirements. (Thus, affected banks were paying lower dividends and making fewer share repurchases than they would have been allowed under the previous year's exercise.) The overall increase in the severity of the hypothetical set of stressful economic and market conditions developed by the Federal Reserve, has resulted in a significant tightening of large banks' capital requirements – approximately 0.93 percent of banks' risk-weighted assets. It would seem to be a mark of how poorly understood the CCAR process is that there has been very little notice paid to the fact that it served this year as a very significant capital increase – on the order of 10 percent – for the banks subject to it.

Lastly, it is worth noting that all the leading banks that are members of BPI are publicly traded companies. The shareholders who benefit from higher dividends or share repurchases are pension funds, individual retirement accounts, large mutual funds, and millions of individual investors. They are the principal beneficiaries of capital distributions.

II. OVERVIEW OF CURRENT CAPITAL REQUIREMENTS

I will now provide general observations about current capital levels, and then proceed in the next part to address particular rules shaping these outcomes.

A. Too High

In general

As the numbers above suggest, there is strong evidence to suggest that banks are holding significantly greater capital and total loss absorbency than can be justified on any historical experience or current analysis. Furthermore, there is no dispute that an increase in capital requirements reduces lending, and ultimately economic growth. Every evaluation of the cost and benefits of capital requirements —including those done by the Bank for International Settlements[7] (the parent of the Basel Committee on Banking Supervision), the Federal Reserve,[8] the Bank of England,[9] the International Monetary Fund[10] – begins by estimating the decline in lending and economic activity caused by

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[7] *See* Bank for International Settlements, *An assessment of the long-term economic impact of stronger capital and liquidity requirements* (August 2010), *available at* www.bis.org/publ/bcbs173.pdf.

[8] *See* Simon Firestone, Amy Lorenc and Ben Ranish, *An Empirical Economic Assessment of the Costs and Benefits of Bank Capital in the US* (2017), *available at* www.federalreserve.gov/econres/feds/files/2017034pap.pdf.

[9] *See* Jihad Dagher, Giovanni Dell'Ariccia, Luc Laeven, Lev Ratnovski, and Hui Tong, *Benefits and Costs of Bank Capitol* (March 2016), *available at* www.imf.org/external/pubs/ft/sdn/2016/sdn1604.pdf.

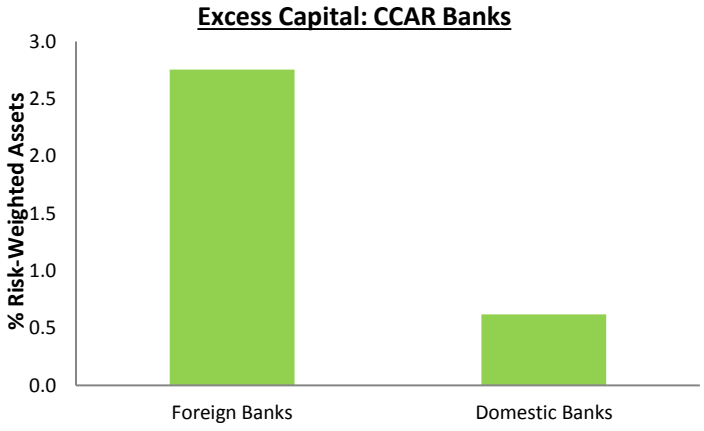
[10] *See id.*

higher capital requirements. The only debate is how much lending and economic activity decrease for a given increase in capital.

Foreign banking organizations

The U.S. operations of international banks headquartered overseas present difficult questions about how to measure capital adequacy, given that they are owned abroad, and most capital of the consolidated company is held at the overseas parent. By our analysis, they also are holding significantly more capital for their U.S. operations than can be justified by data or analysis.

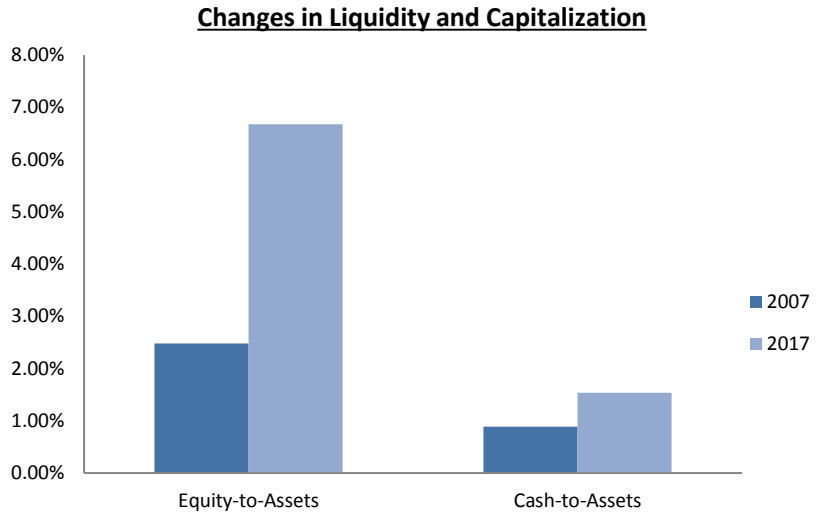
The figure below shows that foreign banking organizations (FBOs) operating in the U.S. are extremely well capitalized. The two bars in the chart depict the amount of excess capital of foreign-owned subsidiary banks in the U.S. and domestic banks relative to risk-weighted assets. The amount of excess capital is defined as the maximum amount of capital those banks could pay out without breaching any of the existing capital requirements.[11] The bar to the left shows the capital buffer of FBOs under the current set of capital requirements and the bar to the right shows the capital buffer of domestic banks. The capital buffer of foreign-owned subsidiary banks operating in the United States and subject to the U.S. stress tests is equal to 2.8 percent of risk-weighted assets, while the capital buffer of domestic-owned U.S. banks is 0.6 percent of risk-weighted assets.



Note: Excess capital is calculated as a percentage of risk-weighted assets under the standardized approach. Excess capital is defined as the maximum amount of capital banks could return to shareholders without breaching any of the current capital requirements. These include 8 non-stressed capital requirements and 10 stressed capital requirements.

[11] *See* Francisco Covas, Brett Waxman, and Robert Lindgren, *The Fed Increases Large Banks' Capital Requirements* (Jun. 29, 2018), *available at* https://bpi.com/the-fed-increases-large-banks-capital-requirements/.

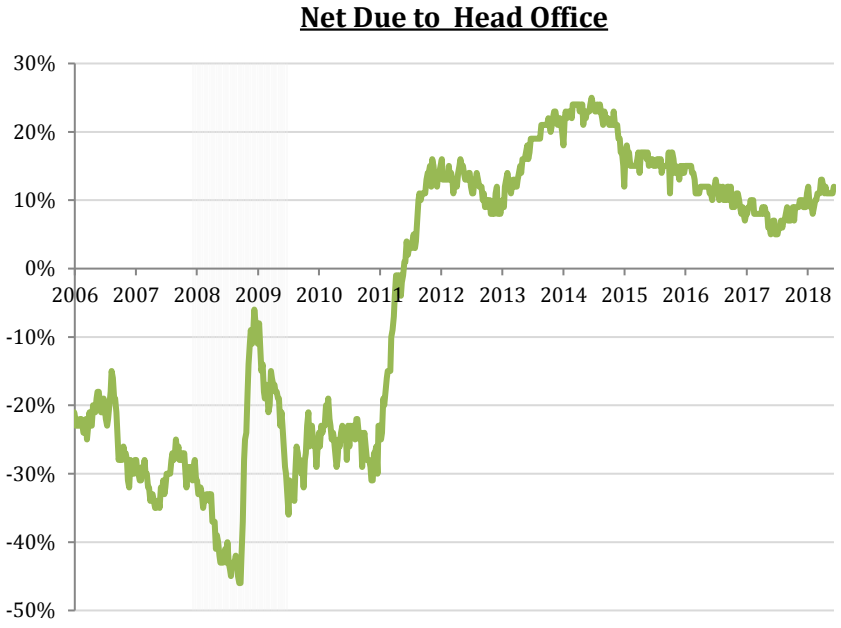
As shown in the chart below, U.S. broker-dealers of foreign banks increased their resilience significantly over the past 11 years. Specifically, the broker-dealers have roughly tripled their capital relative to total assets and approximately doubled their cash holdings as a proportion of total assets.[12]



Source: SEC Form X-17A-5 and BPI calculations

Lastly, foreign-headquartered banks also operate in the United States through branches. In the post-crisis period, the assets and liabilities of the branches and agencies have also experienced profound changes. As shown in the chart below, branches were using U.S. funding to support their overseas operations, which was a valid concern for the Federal Reserve. Beginning in early 2011, however, this pattern reversed, and branches now see much of their funding coming from their foreign parents.

[12] We included the following eleven broker-dealers in our sample: Barclays Capital, Inc., BMO Capital Markets Corp., BNP Paribas Securities Corporation, Credit Suisse Securities (USA), LLC, Deutsche Bank Securities, Inc., HSBC Securities (USA), Inc., MUFG Securities Americas, Inc., RBC Capital Markets, LLC, RBS Securities, Inc., UBS Securities, LLC.



Source: Federal Reserve H8 and BPI calculations

In summary, our analysis shows that the U.S. operations of these banks are extremely resilient.

B. Too Volatile

One underestimated adverse consequence of CCAR stress testing is the volatility it injects into bank capital requirements. We frequently hear from bank CFOs and treasurers that capital planning is extremely difficult when capital requirements vary dramatically year to year, making long term investments in businesses more difficult. Imagine, for example, if the National Highway Transportation Safety Agency changed auto safety tests each year, and what chaos that would bring to auto design and innovation.

Of course, there would be no problem with volatility in capital requirements if it corresponded to actual volatility in risk. This is manifestly not the case, however. This year's CCAR post-stress capital requirement rose about 10 percent, yet no one believes that the relevant banks had a corresponding increase in risk. Rather, the Federal Reserve simply changed its stress scenario and, for all we know, its black box forecasting model, to produce that result. As earlier noted, by the Fed's own forecasts, there is approximately a 50-50 chance of that scenario occurring over the next 10,000 years, yet it has driven a substantial increase in capital requirements this year, which could change again next year – up or down.

This does not make a lot of sense.

C. Too Prescriptive

Capital adequacy measurement can really proceed along three possible paths: the first is for the government to determine the risk of each asset; the second is for each bank to determine the risk of each asset; and the last is to give up and simply assume that each asset has the same risk. For the first two options, there is also the choice of how granular the assessment should be: at one extreme, all loans of a very general type (mortgage, corporate) treated as having the same, standardized risk; at the other, each loan receiving its own unique capital charge.

The clear push of the Federal Reserve post-crisis has been towards the government determining the risk of assets, generally through standardized risk models developed at the Basel Committee, coupled with its own (secret) CCAR model and its own stress scenario design. A leverage ratio, assuming all assets have the same risk, serves as a backstop. And a bank's modeling of its own risk (using models approved by the Federal Reserve) is on course to play little to no role in capital requirements. There is great irony in this approach, as the Global Financial Crisis occurred under a Basel I regime where governmental, standardized approaches governed. Basel III, which allowed banks to model risk for capital purposes, was adopted post-crisis and been generally successful; nonetheless, it is being discarded in the push to implement what is popularly known as Basel IV, which returns to standardized approaches.

Having the government determine capital allocations, and indirectly, which assets banks will choose (because they choose based on ROE), has profound implications for credit allocation. For example, at BPI, and formerly at the Clearing House, we have been particularly interested in the effect of regulation, particularly stress testing, on low and moderate-income borrowers. In effect, when the Federal Reserve projects the effects of CCAR's scenario's unprecedentedly sudden and severe increase in unemployment, an unsurprising result is that loans to low-income borrowers default at high rates. As a result, banks subject to CCAR must hold very high levels of capital against those loans, making them more expensive. The results can be seen in a recent note from Federal Reserve economists, several academic papers, and our own research demonstrated the same effect, both for mortgage and small business lending, as illustrated in the following chart.[13]

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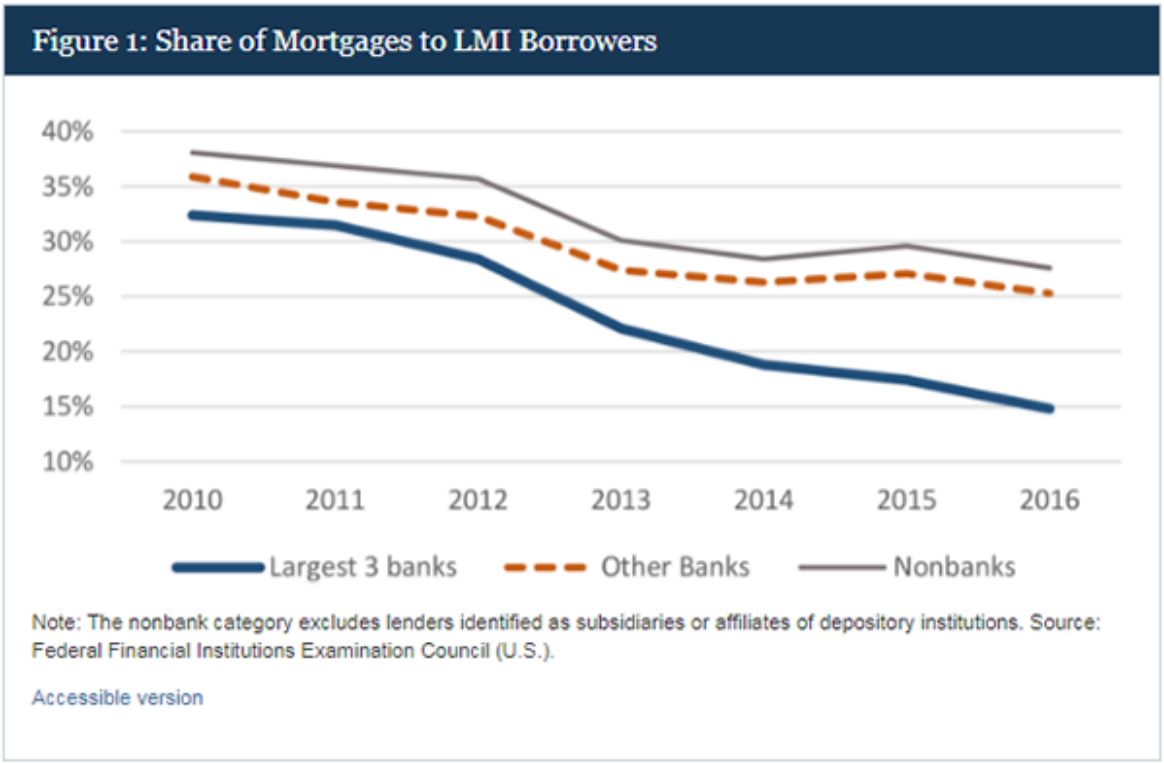
[13] *See* Neil Bhutta, Steven Laufer, and Daniel R. Ringo, *The Decline in Lending to Lower-Income Borrowers by the Biggest Banks* (September 2017); The Clearing House, *The Capital Allocation Inherent in the Federal Reserve's Capital Stress Tests* (January 2017); Viral V. Acharya, Allen N. Berger, Raluca A. Roman, *Lending Implications of U.S. Bank Stress Tests: Costs or Benefits?*, J. OF FINANCIAL INTERMEDIATION (Aug. 18, 2017); Cortés, Kristle, Yuliya Demyankyk, Lei Li, Elena Loutskina, Philip Strahan, *Stress Tests and Small Business Lending*, NBER Working Paper No. 24365 (March 2018); and Michael Bordo and John Duca, *The Impact of the Dodd-Frank Act on Small Business*, NBER Working Paper No. 24501 (April 2018).



III. RECENT AND POSSIBLE FUTURE CHANGES TO THE CAPITAL REGIME

With these concerns as background, I will now discuss some current regulatory proposals, and some others that it would be wise for regulators to pursue in the capital arena.

A. CECL

In 2016, despite serious controversy, the Financial Accounting Standards Board decided to replace the existing incurred-loss accounting method for calculating the allowance for loan losses. The new standard is CECL, the "current expected credit loss" method, which becomes effective in 2020. CECL constitutes a dramatic departure in how loan losses are estimated by the banking industry, and an important debate about CECL's impact on bank capital is now commencing.

We believe that CECL is a major threat to economic stability in a financial crisis. Our analysis shows that it will be profoundly procyclical in its application to bank capital, likely increasing significantly the severity of any future recession.

CECL will also represent yet another capital increase on all banks. To some extent that was the goal, as the hope was that by having large reserves in good times, banks would not have to constrict lending in recession. As our research will show,

however, the effect will be the opposite, and the cost in diminished economic growth from higher capital at all times will have no corresponding benefit.

First, some brief background. U.S. GAAP currently bases the loan loss allowance on a so-called "incurred loss" model: under this method, an allowance for loan losses, or reserve, is provided when a bank estimates that a loss is *probable* of having been incurred, and the bank can *reasonably estimate* the amount of the loss. In sharp contrast, under the new CECL model, banks will be required to estimate the losses that are expected to occur over *the entire life of the loan*. That is, a reserve must be provided if a loss can be predicted to occur *at any time in the future*. The allowance under CECL therefore will be based on each bank's projected estimates of future economic conditions, and how those future conditions will influence the loan portfolio.

Furthermore, although CECL will require banks to provide for future *losses* expected to arise on loans immediately upon being made, CECL will not permit banks to record expected future *income* from those loans until interest is actually earned in future periods. Because the regulatory capital framework uses GAAP, the U.S. banking agencies have acknowledged that implementation of CECL in 2020 will require a downward adjustment to bank regulatory capital levels (CET1). But because the CECL provisions represent a reserve for future, not just incurred, credit losses, they essentially represent additional loss absorbency capacity for banks. Therefore, requiring banks to hold capital against CECL accounting losses without a corresponding recalibration downward of the regulatory capital minimums, would appear to misstate the actual financial condition of each bank.

Of far greater, systemic, concern, CECL also will provide a strong incentive for banks to reduce lending to riskier customers such as households with less than perfect credit histories. Furthermore, because borrower risk goes up in a downturn, that disincentive will intensify in a recession, potentially amplifying economic weakness. CECL also may affect the pricing, terms and availability of longer-dated credit products (e.g. residential mortgage loans) and increase liquidity risk for companies outside the banking sector as a result of obtaining loans with a shorter tenor (i.e., lower durability of funding and increased spread and refinancing risk for banks' clients). The irony here is extreme, as CECL was originally proposed by the Financial Stability Board with the opposite goal in mind.

We had heard this concern anecdotally from bank CFOs for some time. But this week, we released a study demonstrating how the banking system would have behaved had CECL been in place for the period 2007-09. Bank capital would have been sharply reduced at the height of the financial crisis, likely doubling the contraction in lending by banks that occurred, deepening the recession. While some of the procyclicality comes from the accounting *per se*, the larger impact is from its effect on bank capital. Thus, the bank regulators can and should mitigate that effect.

B. S. 2155 and Tailoring of Regulation

President Trump recently signed into law S.2155, the Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA), the first significant

amendment to the Dodd-Frank Act since its enactment.[14] S.2155 reflects a clear consensus that the enhanced capital, liquidity and other regulations required under the Dodd-Frank Act (DFA) for larger banks should be applied in a much more tailored fashion. However, to have their intended effect, many of its provisions depend on faithful implementation by the Federal Reserve and other banking agencies.

S. 2155 revises sections 165 and 166 of DFA, which together require the Federal Reserve to establish "enhanced prudential standards" – that is, more stringent capital, liquidity, stress testing, resolution planning and other rules – for larger banks. DFA took a simplistic approach in determining to whom the enhanced standards should apply: any bank holding company with more than $50 billion in consolidated assets.

S. 2155 revised the thresholds for imposing enhanced prudential standards in three important, complementary ways. First, institutions under $100 billion are no longer subject to enhanced prudential standards – full stop. Second, institutions with consolidated assets between $100 and $250 billion will become exempt from most of those standards in 18 months unless the Federal Reserve determines otherwise by rule or order, and will be subject only to "periodic" supervisory stress tests. Third, S. 2155 mandates that the Federal Reserve differentiate how it applies any enhanced prudential standards to covered institutions based on risk-related factors, including a firm's complexity.

We believe that the letter and spirit of S. 2155 compel a variety of implementing regulatory changes.

First, the Federal Reserve should move forward promptly to implement the stress testing changes authorized by S. 2155 for firms with $100-$250 billion in assets – prior to the CCAR 2019 cycle. S. 2155 no longer requires annual supervisory stress tests, but instead only "periodic" supervisory stress tests. Whatever time period is chosen, it obviously must be something less frequent than annual, because that is the precisely the term Congress chose to replace.

Second, and also for firms with $100-$250 billion in assets, S. 2155 creates a clear default principle for all other enhanced prudential standards (e.g., living wills, the LCR, and other requirements): they should apply only if the Federal Reserve affirmatively determines that applying that standards is "appropriate to address financial stability risks or safety and soundness concerns and has taken into consideration the firm's capital structure, riskiness, complexity and other factors." In assessing which rules (if any) may meet that standard, the Federal Reserve should engage in a public rulemaking process that (i) clearly focuses on whether there are any heightened risks to be reduced, and (ii) demonstrates that any benefits of applying any particular enhanced standard outweigh its costs.

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[14] Economic Growth, Regulatory Relief and Consumer Protection Act. Pub.L. No. 115-174 (2018).

Third, a provision of EGRRCPA prevents the regulatory agencies from applying heightened risk-weights to high volatility commercial real estate (HVCRE) exposures unless they meet new, narrower criteria. This will resolve uncertainty about capital requirements applicable to certain acquisition, development, and construction loans. The agencies need t to update the capital rules and associated reporting form instructions (e.g., the FR Y-9C and Call Report instructions) to conform to this aspect of the EGRRCPA, and should do so swiftly.

Finally, for all firms that received regulatory relief under S. 2155 – but especially firms under $100 billion in assets, which were exempted from enhanced standards altogether – it is crucial that the Federal Reserve and other agencies not impose via the examination process what they have just been prohibited from imposing via the regulatory process. As we have written elsewhere, post-crisis, examiners, have frequently imposed unwritten requirements through the examination process, with a downgrade in rating as their leverage. There is therefore the risk that examiners may simply reimpose enhanced prudential standards through a series of Matters Requiring Attention (MRAs) or Matters Requiring Immediate Attention (MRIAs), or by conducting a horizontal review and then criticizing a firm for not following the "best practices" observed by firms that are subject to enhanced standards. Any such result would contravene the express purpose of S. 2155. Yet we have already heard banks tell us that this process has begun. Nowhere would continuing Congressional oversight be more useful than in this area.

C. Tailoring More Broadly

S. 2155 should also serve as a catalyst to recalibrate the larger regulatory framework for banking institutions of *all* sizes. An institution's size is not a reflection of the risk it poses to the system. The new law replaces the vague encouragement that regulators tailor, which frequently was ignored, with a firm requirement that they do so. It is no longer the case that the Federal Reserve "may" tailor each of its enhanced prudential standards; now, it "shall."

For example, Vice Chair Quarles has already noted the need for greater tailoring of enhanced liquidity standards (e.g., the liquidity coverage ratio and internal liquidity stress testing rules), emphasizing the need for "concrete steps toward calibrating liquidity requirements differently for large, non-G-SIBs."[15] Similarly, the agencies should also move quickly to finalize certain aspects of a pending September 2017 proposal to simplify regulatory capital rules. This would include increasing the CET1 deduction threshold for mortgage servicing assets, certain deferred tax assets, and investments in the capital of unconsolidated financial institutions, as well as changing the treatment of minority interests to include greater amount of subsidiary-issued capital in its consolidated capital ratios.

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[15] *See* Randal K. Quarles, *Early Observations on Improving the Effectiveness of Post-Crisis Regulation* (Jan. 19, 2018).

For foreign firms, tailoring should include a review (and explanation) of the process by which they are designated for inclusion in the Federal Reserve's Large Institution Supervision Steering Committee (LISCC). Designation as a LISCC firm effectively triggers enhanced supervision, and foreign banks report that LISCC pressure has played a role in their shrinking of capital markets businesses in the United States, which has had real but unfortunately undebated impacts of U.S. businesses. Yet the Federal Reserve process for designating firms for inclusion is opaque and the decision effectively unappealable. There is no known process for de-designation, and no example of it.

More broadly, U.S. gold-plating particularly affects foreign-headquartered banks that are often required to comply with multiple duplicative and different standards including at the home country level. As a result, the Federal Reserve should also carefully consider tailoring of the above described standards to foreign banking organizations (FBOs) in light of the mandate of S.2155. Under S. 2155, 14 FBOs are swept into enhanced standards because the $250 billion asset threshold is interpreted in terms of global assets whereas only 11 U.S.-headquartered firms are covered. For many of those foreign banks, their U.S. operation is a standard, mid-sized regional bank. The Federal Reserve should consider how to best tailor the enhanced prudential standards to the U.S. footprint of FBOs that are often on par with regional and smaller community banks than large U.S. banking organizations. The Treasury Report on banking, for example, recommends tailoring the application of enhanced prudential standards to FBOs based on their U.S. risk profile and proportionate to the risks such firms present to the U.S. financial system. Such tailoring would be consistent with S. 2155 and with long-standing principles of national treatment and deference to home country supervision, and would ensure protection of American financial interests abroad and continued foreign investment in the United States, which is substantial.

D. Pending Capital Reforms

There are currently pending two significant regulatory proposals that would reform important aspects of the capital framework for larger banks. The first is a long-overdue recalibration of the enhanced supplementary leverage ratio (eSLR), and the other is the Federal Reserve's proposal to better integrate its stress testing exercise into risk-based capital requirements through establishment of a stress buffer framework. Each holds significant promise to simplify and rationalize our existing byzantine capital rules, but also includes meaningful weakness that should be cured before the proposal is finalized.

Proposed changes to the eSLR

In April, the Federal Reserve and OCC proposal to revise the eSLR requirements applicable to U.S. GSIBs and their subsidiary insured depository institutions, and to make conforming changes to the TLAC and eligible long-term debt requirements applicable to

U.S. GSIBs.[16] Reflecting a broad consensus that the initial, uniform calibration of the eSLR was both insufficiently tailored and inappropriately calibrated, the eSLR proposal would replace the current uniform surcharges with specific surcharges based in part on each firm's applicable GSIB surcharge.

As we have often noted, given the significant shortcomings of a leverage ratio measure, it is critical that any leverage requirement be set as a backstop, and not as a potentially binding capital requirement in ordinary circumstances.[17] The latter would drive misallocation of capital in the economy – as any measure that ignores risk is bound to do – and discourage low-risk, low- return activities that are critical to the effective functioning of financial markets.

At the same time, and similar to our concerns with the pending stress buffer proposal, the eSLR's use of the Federal Reserve's GSIB surcharge rule to determine the size of eSLR requirements further increases the importance of a comprehensive reassessment and recalibration of the U.S. GSIB surcharge. And even as revised, the eSLR proposal would continue to use the existing, flawed leverage denominator for purposes of relevant calculation. Thus, the agencies should consider modifying the denominators for leverage requirements, including by implementing the U.S. Treasury Department's recommendations in its June 2017 report regarding the SLR denominator. In that report, the U.S. Treasury Department recommended that the total leverage exposure measure (i.e., the SLR denominator) exclude (i) central bank reserves, (ii) U.S. Treasury securities and (iii) initial margin for centrally cleared derivatives.[18]

Serious problems with the Federal Reserve's stress testing regime

To be clear, we continue to believe that stress testing is a smart way to evaluate the resiliency of a bank. More static measures are necessarily backward looking and therefore assume, for example, that if subprime mortgages have repaid consistently over a period of years, they will continue to do so. Importantly, stress testing also recognizes

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[16] *See* 83 Fed. Reg. 17317 (Apr. 19, 2018). A comprehensive analysis of the eSLR proposal is contained in our comment letter, which is available at www.bpi.com/wp-content/uploads/2018/07/8ee793eaea964573b2850373bd055335-2.pdf.

[17] *See, e.g.,* Greg Baer, *The Leverage Ratio: Neither Simple Nor Sensible* (June 26, 2017), *available at* https://bpi.com/the-leverage-ratio-neither-simple-nor-sensible-2/; *see also The Clearing House Comment Letter Re: Stress Testing Transparency Proposals* (Jan. 22, 2018) at Annex A 3-5, *available at* https://bpi.com/recent-activity/tch-offers-recommendations-to-improve-stress-testing-transparency/.

[18] *Id.* S*ee also* The Clearing House, *Submission to the U.S. Treasury Department: Aligning the U.S. Bank Regulatory Framework with the Core Principles of Financial Regulation* (May 2, 2017), at 13-15, *available at* www.theclearinghouse.org/~/media/TCH/Documents/TCH%20WEEKLY/2017/20170502_TCH_Submission_to_UST_re_Core_Principles_Study.pdf.

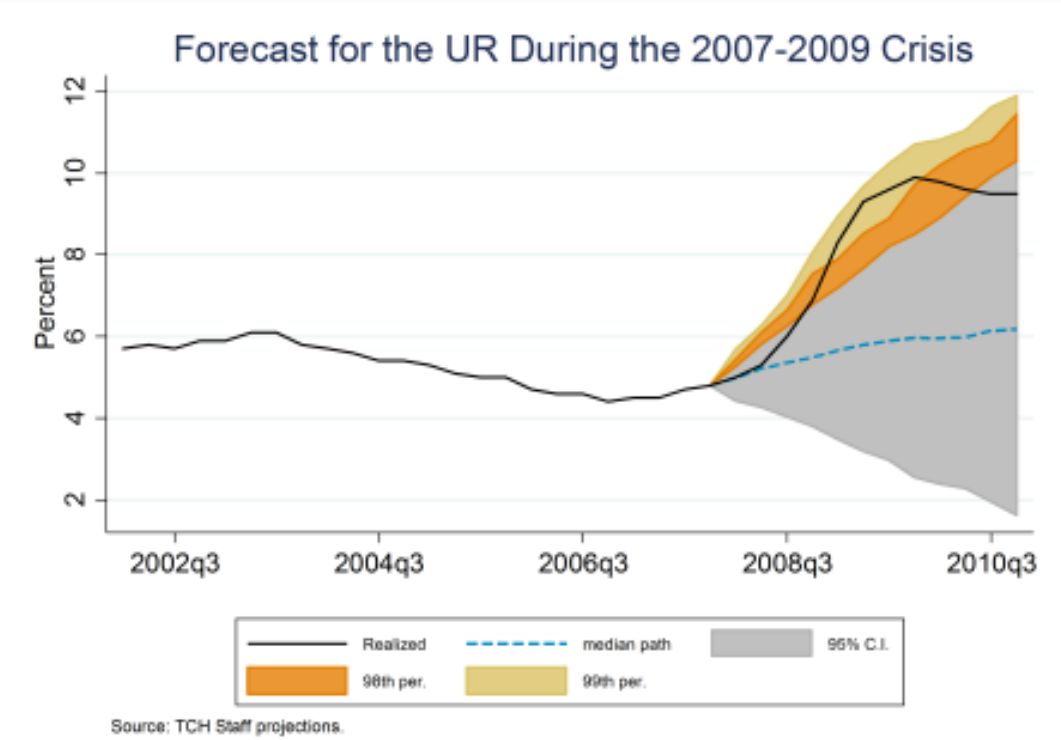
implicitly the benefits of firm diversification: a given stress might cause losses to certain divisions of a diversified firm but bring gains to others. As implemented in CCAR and the Federal Reserve's capital planning process, stress testing is also clearly countercyclical.

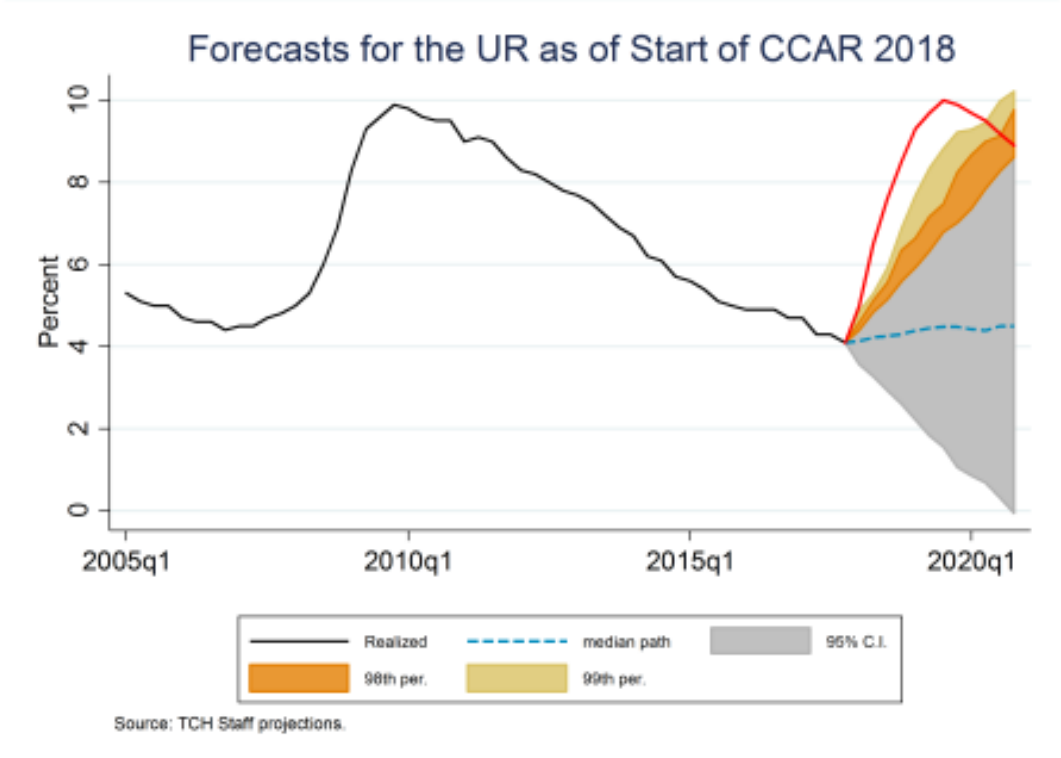
Notwithstanding these clear advantages, there are continuing concerns about the Federal Reserve's CCAR exercise – in particular about both procedural and substantive deficiencies in how it is constructed in theory and applied in practice.

Reading and watching market analysis of recent 2018 CCAR stress test results, I've been struck by how analysts and investors clearly understand something that many policymakers do not: how extreme, and thus how extraordinarily improbable, this year's stress scenario was. As I noted earlier, the stress test scenario has about a 50-50 chance of occurring once in 10,000 years, and investors appeared to have quite appropriately drawn no lessons about the financial condition of the banks based on their performance. Rather, insofar as market prices reacted to the results, the reaction reflected news about what capital distributions the Federal Reserve would allow the banks to make, or the ability of the firm to deal with the Federal Reserve, not news about the condition of the banks.

The Federal Reserve designs its stress scenarios using what it calls "a recession approach," in which the severely adverse scenario is intended to "reflect conditions that characterize post-war U.S. recessions, generating either a typical or specific recreation of a post-war U.S. recession." While we have argued for a different, probabilistic approach, this year's scenario is clearly inconsistent with both.

As an illustration of the extraordinary implausibility of this year's stress scenario, the two charts below compare density forecasts of the unemployment rate during the 2007-2009 financial crisis (first panel) with its path under the Fed's severely adverse scenario (second panel). During the first nine quarters of the 2007-2009 financial crisis, the realized unemployment rate was always less than the 99th percentile (the yellow portion of the cone). However, as can be seen in the chart below, under the severely adverse scenario in CCAR 2018, the path of the unemployment rate is almost always above the 99th percentile of our forecasts. Indeed, the unemployment rate path under the severely adverse scenario approximately corresponds to the worst path we were able to generate across thousands of simulations of our model. Moreover, the rise in the unemployment rate is assumed to take place much more rapidly than was true in the financial crisis, causing losses under the Fed's scenario to ramp up very quickly. We can find no historical antecedent for the suddenness of the stress in the unemployment rate.





Consider, then, the central, continuing problem with the Federal Reserve's CCAR stress test: *it bases its capital assessment not on a bank's current financial condition or how its assets are most likely to behave in the future, but rather on how those assets*

would behave under a single stress event of unimaginably unlikely severity. And because regulatory capital requirements produced by CCAR are now so high as to drive bank credit allocation decisions, it means that *banks subject to CCAR are increasingly pressured to choose assets based on how well they perform under the Fed's single, apocalyptic scenario, not how they would perform under far more likely scenarios*.

Of course, to some extent, the problems above are inherent in the nature of stress testing, as any prescribed stress will be extremely unlikely to occur. Stress testing serves as a countercyclical capital buffer exactly because it presumes that current good times will turn bad at some point in the future, and rightly so. But the Federal Reserve multiplies this inherent problem exponentially by using a single scenario, and a single scenario of such extreme unlikelihood.

Any concerns about the use of a single scenario are greatly amplified when one realizes that the Fed, in addition to using only one scenario of its own devise, uses only one model of its own devise (kept secret, without public review let alone comment) to estimate each bank's losses under that model, and has proposed to use its own or a Basel-designed model for every other component of its proposed new capital standard.
In a recent article, *The Quiet Revolution in Central Banks*, I described how the Federal Reserve's recent capital proposal would combine a Basel minimum standard, CCAR results (through a so-called stressed capital buffer), a GSIB surcharge, and potentially a countercyclical capital buffer to establish what would almost certainly be the binding capital constraint for any bank subject to it:

> "All of the component parts involve either the Federal Reserve or the Basel Committee, not the bank, modeling the risk. The remarkable result of this process is that at no point is a bank's view of the risk of a loan or any other asset relevant to the capital it must hold against that asset…. There is good reason to believe this would end poorly for the U.S. economy. Governmental attempts at direct or indirect credit allocation have a dismal history. Economic growth would suffer, as diversity in risk tolerance and judgment produce greater opportunities for businesses and individuals to obtain bank credit. Furthermore, because standardized risk measures and the Federal Reserve's loss-forecasting models are necessarily crude and one-size-fits-all, relying on less data than the banks' own models, much of the capital allocation they drive is likely to be misallocation. Lastly, systemic risk would increase as large banks were forced to concentrate in asset classes favored by the governmental models. (There is also the converse risk that non-banks would concentrate in asset classes disfavored by the governmental models; because those actors operate outside the purview of the Federal Reserve and do not qualify for

lender-of-last-resort support, a collapse in prices for those assets would constitute its own systemic risk.)"[19]

In sum, leaving model variation aside for the moment and focusing just on scenario design, the Federal Reserve should seek public comment on at least three key questions: (i) how many stress scenarios to use (including the possibility of using some bank-designed, bank-specific scenarios), (ii) by what standard those scenarios should be designed (e.g., with what probability they should be likely to occur); and (iii) how their results should be combined (e.g., by averaging the losses and revenue under each scenario). Each subsequent year, it should then publish proposed scenarios for comment to ensure they meet the Fed's own previously published designed standard. Averaging across results will help reduce volatility. To further reduce volatility in outcome, it should also propose averaging the previous two to three years of results before using those results as minimum capital standard. This would reduce volatility significantly, and allow for better capital planning.

The Federal Reserve's stress buffers proposal

In April, the Federal Reserve issued a long-awaited proposal to establish a stress buffer framework that would create a single, integrated set of capital requirements by combining the supervisory stress test results of CCAR exercise with the ongoing requirements of its Basel III regulatory capital rule.[20] This stress buffers proposal could increase the coherence and simplicity of the U.S. bank capital framework and resolve long-standing flaws in the design and mechanics of the DFAST and CCAR exercises.

For example, we strongly support the proposal to eliminate from CCAR and DFAST the currently applicable assumption that firms' balance sheets and risk-weighted assets ("RWAs") grow under stressed conditions. Under an actual stress scenario, firms' balance sheets would be affected by a combination of counterparty actions (including defaults, draw-downs on existing lines of credit and demand for new credit) as well as shocks to market-wide demand. It is unrealistic, and contrary to historical experience to assume that these effects would, in the aggregate, result in a firm's balance sheet *growing*

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[19] *See* Greg Baer, *The Quiet Revolution of Central Banks* (Jun. 7, 2018), *available at* www.theclearinghouse.org/banking-perspectives/2018/2018-q2-banking-perspectives/departments/quiet-revolution-central-banks.

[20] *See* Board of Governors of the Federal Reserve System, *Amendments to the Regulatory Capital, Capital Plan, and Stress Test Rules*, 83 Fed. Reg. 18,160 (Apr. 25, 2018). As proposed, the proposal would apply to bank holding companies with $50 billion or more in total consolidated assets and U.S. IHCs of FBOs established pursuant to Regulation YY. We assume that the Federal Reserve will adjust the $50 billion threshold and scope of applicability to be consistent with the EGRRCPA.

under stress. As a result, removing the balance sheet and RWA growth assumptions from DFAST and CCAR would make the stress testing framework more realistic.

So, too, would the removal of the assumption that firms would continue making all common stock dividend payments and share repurchases in the midst of such extreme stress, particularly when regulations would prohibit those payments.

At the same time, however, further important changes to the proposal are necessary to produce more realistic scenarios and assumptions, reflect more accurate and updated measures of risk, and achieve the intended simplification and elimination of the quantitative objection to a firm's capital plan for banking organizations covered by the proposal.[21]

First, while integrating stress losses into ongoing capital requirements through the proposed stress buffers would promote the transparency and simplification of the capital and stress testing framework, it would also heighten the urgency to reform scenario design (as described above) and reduce the volatility of estimated stress losses.

Second, the Federal Reserve should significantly enhance its disclosures about supervisory models to allow for greater model transparency, which would facilitate feedback to improve the quality and credibility of supervisory models. Use of bank models should be considered where appropriate, particularly if full transparency is not provided.

Third, final stress buffer requirements should not include an additional component for four quarters of planned common stock dividends in light of the payout restrictions under the Federal Reserve's capital rule, which would prohibit such payments.

Fourth, consistent with the intended elimination of any quantitative objection to a firm's capital plan, the Federal Reserve should amend the capital plan rule to fully eliminate any residual basis for a quantitative limitation on capital distributions. This would comport with the Federal Reserve's stated expectation that a firm's board of directors and senior management should be responsible for capital planning. Of course, firms would still be required to remain in compliance with all capital requirements after a capital distribution is made.

Fifth, the proposal's effective transition of the GSIB surcharge into a post-stress minimum requirement makes it imperative to review and reassess the U.S. implementation of the GSIB surcharge, which currently suffers from conceptual and methodological flaws.

Sixth, a footnote in the proposal noted that U.S. IHC subsidiaries were excluded from the impact analysis the Federal Reserve conducted on the proposal. The proposal

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[21] A comprehensive analysis of the stress buffers proposal is contained in our comment letter, which is available at www.bpi.com/wp-content/uploads/2018/07/f751f6eaf79445b3ae744b6e02816d3d-1.pdf.

should be amended to take into account the different circumstances of the U.S. IHCs of FBOs. In any event, prior to finalization of the buffer requirements, the Federal Reserve should analyze the impact of the proposal on these firms to better inform the calibration of the stress buffer applicable to U.S. IHCs of FBOS in recognition of the different business models, risks, and exposures of those firms.

C. Foreign Bank Regulation

The key issue in appropriate regulation for the U.S. operations of international banks is appropriate tailoring, consistent with longstanding principles of national treatment. The enhanced prudential standards (e.g., capital, liquidity, stress testing, etc.) should be applied to the U.S. operations of foreign banks consistent with their U.S. footprint and risk profile. The development of the U.S. intermediate holding company makes it appropriate to consider the U.S. operations of international banks in what is essentially a U.S. ring-fenced entity. We would note that the Federal Reserve's recently issued single-counterparty credit limit rule starts to employ tailoring by creating a construct more deferential to equivalent home country regimes.

However, there is much room for additional forms of tailoring for the U.S. operations of international banks. Higher capital and liquidity standards should not tie to thresholds based on foreign exposure. International banks are often required to comply with higher requirements due to a $10 billion foreign exposure threshold present in a number of Federal Reserve rule's like the net stable funding ratio (NSFR). Capital and liquidity requirements more generally should take into account the fact that the IHC is supported by an international bank that can act as a source of strength.

Ring fencing

The Federal Reserve set the internal TLAC requirement for all foreign banks operating in the United States at 90% – at the highest end of the agreed-upon range, and (in violation of the FSB agreement) without any consultation with the relevant crisis management groups or other consideration of the risks posed by the individual subsidiaries.

Furthermore, the United States also imposed a standalone debt requirement on foreign banks, meaning that they are limited in how much equity can count towards meeting that 90% requirement. Not only was this action a break from an international standard, it also makes little policy sense, as equity is by all accounts more loss absorbing than debt.

The practical impacts of that decision are profound. The application of CCAR to the U.S. subsidiaries of foreign banks has dramatically raised their equity ratios, yet the standalone debt requirement means that there can be no corresponding decrease in the debt they carry. Thus, by one recent estimate, the effective average internal TLAC requirement for foreign banks operating in the United States is not 75 percent or 90 percent but rather 140 percent – a degree of ring fencing that is both unjustifiable on the

merits and inconsistent with the Financial Stability Board's own standard.[22] There is also strong evidence that this action has triggered a regulatory trade war, with foreign jurisdictions preparing to require similar U.S. ring fencing of the operations of U.S. banks abroad.

Fortunately, in recent remarks, Vice Chair Quarles has indicated a willingness to revisit the race toward ring fencing.[23] And it will be just as important for U.S. regulators to pursue similar, reciprocal adjustments to internal TLAC requirements that are imposed on the overseas operations of U.S. banks.

Examination

Branches of foreign banks are extensions of their home country bank, and are supervised as such by their home country regulators. Nonetheless, the Federal Reserve increasingly, through its CISO regime, is examining these branches as if they were U.S. banks. The result is a massive resource drain, as foreign banks must set up shadow governance and risk management regimes, when the major advantage of branching is to allow consolidated management. It would be akin to requiring a U.S. bank operating nationally to have a separate Chief Risk Officer for its Arkansas branches, its North Carolina branches, etc.

Of course, the Federal Reserve had a valid concern when these branches were borrowing funds in the U.S. and using those funds to lend to their foreign parents before the crisis, creating a substantial cross-border liability. Now, however, even as those branches has moved from a "due from" to a "due to" position.

D. GSIB Surcharge

In the United States, the eight "global systemically important banks" (GSIBs) are required to hold more capital than other banks by an amount equal to their "GSIB surcharges," which currently range from 1.5 to 3.5 percentage points. The GSIB framework has numerous weaknesses which should be addressed over both the short and long term.

Adjustment for economic growth

In the short term, the Federal Reserve should adjust the GSIB surcharge to account for economic growth since it was initially put in place.

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[22] *See* D. Wilson Ervin, *The Risky Business of Ring-Fencing* (Dec. 12, 2017), *available at* https://ssrn.com/abstract=3085649.

[23] Randal K. Quarles, *Trust Everyone--But Brand Your Cattle: Finding the Right Balance in Cross-Border Resolution* At "Ring-Fencing the Global Banking System: The Shift towards Financial Regulatory Protectionism" Symposium (2018).

In the United States, the GSIB surcharge is calculated as a fixed constant times the GSIB's systemic indicator score mapped into discrete ranges. The ranges each correspond to 50 basis point increments in the surcharge. In the Basel methodology, known as Method 1, the systemic indicator score is calculated using an equally weighted average of five measures of systemic importance—complexity, interconnectedness, cross-jurisdictional activity, substitutability, and size. However, in the U.S. implementation of the G-SIB surcharge framework, the Federal Reserve requires U.S. banks to calculate their systemic indicator scores under two different methods, with the higher of the two resulting surcharges applying. The U.S. score, known as Method 2, replaces the "substitutability" category with "short-term wholesale funding." Four of the measures under Method 2 – complexity, interconnectedness, cross-jurisdictional activity, and size – are calculated as the sum of balance-sheet and off-balance-sheet items for a GSIB at the end of each year, divided by the average over the 2012 and 2013 levels of the aggregate sum across global GSIBs of those same items. Thus, these four measures will trend up over time with both inflation and with economic growth, even if risk remains constant.[24]

In the final rule establishing the GSIB surcharge, the Federal Reserve noted:

> "Scores calculated under the fixed approach could be influenced by factors unrelated to systemic risk such as general economic growth. Method 2 does not include an automatic mechanism to adjust for such potential effects in order to avoid unintended consequences. For example, under a fixed approach scores could potentially increase over time as a result of general economic growth as the economy expands. One way to address this effect could be to deflate scores by the rate of economic growth. However, such an approach could have the unintended consequence that scores would increase procyclically in the event of an economic contraction, thereby potentially raising capital surcharges in a way that could further exacerbate the economic downturn. …The Board will periodically reevaluate the framework to ensure that factors unrelated to systemic risk do not have an unintended effect on a bank holding company's systemic indicator scores."[25]

The Federal Reserve notes that the factors entering into the score should be adjusted for economic growth, but expresses concern that doing so would make the surcharges procyclical: if nominal GDP fell, capital requirements would go up. To

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[24] The fifth measure, "short-term wholesale funding" (STWF) is calculated as the ratio of the GSIB's STWF divided by its average risk-weighted assets over the previous four quarters. Because the STWF measure is divided by a number that also will grow over time, it will not trend up with economic growth and inflation.

[25] *See* Board of Governors of the Federal Reserve System, *Regulatory Capital Rules: Implementation of Risk-Based Capital Surcharges for Global Systemically Important Bank Holding Companies*, 80 Fed. Reg. 49082 (Aug. 14, 2015), *available at* www.gpo.gov/fdsys/pkg/FR-2015-08-14/pdf/2015-18702.pdf.

address this concern, BPI researchers used the CBO's estimate of potential nominal GDP rather than actual nominal GDP as a measure of activity. Potential GDP is essentially the trend in output after removing business cycle variation. Potential nominal GDP in 2017 was 16.4 percent higher than the average of its level in 2012 and 2013. We recalculated the GSIB surcharges adjusting the four components that are subject to a trend. As shown in the table, the adjusted systemic indicator scores fall for each bank, with the average score falling by 10 percent, with the average surcharge declining by 19 basis points. Put another way, nominal GDP growth since the GSIB surcharges were adopted has inflated the surcharges by 19 basis points on average.

Broader concerns

The GSIB surcharge also has other, more fundamental problems that we recommend the Federal Reserve resolve over time.

First, the methodology does not estimate the systemic losses that would occur if each GSIB were to fail. Instead, the losses are simply assumed to be proportional to a specific weighted sum of selected bank characteristics. Different, equally reasonable, assumptions governing the relationship between systemic loss given default and bank characteristics would deliver materially different surcharges. Because the systemic loss given default is assumed, not estimated, the GSIB surcharge has not been adequately substantiated and may not be appropriately "calibrated."

Second, although the methodology does estimate empirically the relationship between capital levels and the odds of failure, the estimate is based on historical experience, and is very sensitive to the number of banks included and the time period used, and includes banks that are in no way representative of today's GSIBs. To appreciate the impact of including unrepresentative firms, consider First City Bancorporation of Texas, a BHC that concentrated its portfolio in Texas real estate and energy lending, received FDIC open bank assistance in 1988, and later failed. Inclusion of this single bank holding company in the data set appears to increase the GSIB surcharge for a hypothetical average GSIB by 40 basis points under the Federal Reserve's methodology. Limiting the sample to a truly representative set of banks would reduce the charge significantly, and appropriately.

Third, the methodology omits highly significant factors in determining the systemic risk that would be imposed by the failure of a given GSIB – the ostensible purpose of the surcharge. Several post-crisis steps have significantly reduced the systemic impact of a GSIB default: robust new liquidity rules; the single-point-of-entry resolution strategy; the plans for resolution under bankruptcy required by Title I of Dodd-Frank; the Federal Reserve's total loss absorbing capacity (TLAC) rule which has added hundreds of billions of dollars of gone-concern loss absorbency by making it legally required and operationally feasible to "bail in" debt holders; and the ISDA protocol among derivatives dealers that prevents derivatives close-outs of the type seen with Lehman. Arguably, all of these factors are more relevant than those considered in the Federal Reserve's

methodology; all have been (justifiably) touted by Federal Reserve officials as materially reducing systemic risk, and yet none have any impact on the GSIB surcharge whatsoever.

Thank you for the opportunity to testify.