Dennis M. Kelleher
President and CEO
Better Markets, Inc.
Testimony on "Examining the Impact of the Volcker Rule on Markets, Businesses, Investors and Job Creation, Part II"
The Committee on Financial Services
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Good morning Mr. Chairman Bachus, Ranking Member Frank and members of the Committee. Thank you for the invitation to Better Markets to testify today.

Better Markets is a nonprofit, nonpartisan organization that promotes the public interest in the domestic and global capital and commodity markets. It advocates for transparency, oversight and accountability with the goal of a stronger, safer financial system that is less prone to crisis and failure, thereby, eliminating or minimizing the need for more taxpayer backed or funded bailouts. Better Markets has filed more than 110 comment letters in the U.S. rulemaking process related to implementing the financial reform law and has had dozens of meetings with regulators. Our website, www.bettermarkets.com , includes information on these and the many other activities of Better Markets.

My name is Dennis Kelleher and I am the President and CEO of Better Markets. Prior to that, I was a senior staffer in the Senate. Prior to the Senate, I was a litigation partner at Skadden, Arps, Slate, Meagher & Flom, where I specialized in securities and financial markets in the U.S. and Europe. Prior to obtaining degrees at Brandeis University and Harvard Law School, I enlisted in the U.S. Air Force while in high school and served four years active duty as a crash-rescue firefighter. I grew up in central Massachusetts.

INTRODUCTION

The Volcker Rule is, in many ways, very simple: it prohibits the handful of biggest too-big-to-fail banks from making high risk speculative bets, typically very, very big bets, usually but not always[1] with the banks' own money as distinguished from investing and trading their customers' money on their customers' behalf. This type of trading is nothing more than gambling. The reason for the rule is also simple: banks making such big speculative bets, usually with enormous amounts of borrowed money (i.e., the bets are highly leveraged), are very high risk and can pose a threat to the stability and solvency of

[1] JP Morgan's so-called "London Whale" loss arose from **a huge speculative proprietary trade using federally insured depositors' money**, which was done to generate profits for JP Morgan yet which generated more than $6 billion in gross losses for the bank so far. This is a stark example of why a ban on proprietary trading by systemically significant too big to fail banks is so essential to protecting investors,

not just the particular gigantic bank making the bet, but also that bank's counterparties, creditors, customers and, indeed, the financial system as a whole and, ultimately, the taxpayers who will be called on to bailout the bank when the bet loses.

Big banks gambling like this would be fine if it only threatened the betting bank and only the bank suffered the consequences. But that is not the case with proprietary trading by the biggest, taxpayer-backed, too-big-to-fail banks: they get the upside of their gambling and taxpayers get the downside when the bets go bad and the losses are lethal, as was evidenced in the recent financial crisis. It is only this type of very high risk speculative gambling by the biggest banks with their own or borrowed money for their own profit maximization that the Volcker Rule prohibits. Importantly, the rule expressly permits market making, risk mitigating hedging and other important legitimate types of banking activities.[2]

It is important to remember that the Volcker Rule is narrow in application and limited in scope: it only applies to the few banks that are so big that their failure would threaten the entire financial system and the country's economy – as they did in the financial crisis of 2008. Thus, it only applies to those banks that the federal government would spend any amount of money to prevent them from failing so that the country would not have to suffer a Second Great Depression, which almost happened as a consequence of the financial collapse of 2008.[3]

The Volcker Rule's prohibition is also narrowly targeted at a particularly pernicious, dangerous and, indeed, lethal type of big bank behavior: proprietary trading, where banks place huge bets with lots of borrowed money that promise enormous upside, but risk even greater downside. This type of conduct, a key reason for huge losses

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[2] Better Markets has filed four comment letters with various regulatory agencies in connection with the proposed Volcker Rule, which detail and elaborate on the topics discussed here. Links to those comment letters are below and they are incorporated as if fully set forth here: "Public Input for the Study Regarding the Implementation of the Prohibitions on Proprietary Trading and Certain Relationships With Hedge Funds and Private Equity Funds" (Nov. 5, 2010) *available at* http://www.bettermarkets.com/sites/default/files/FSOC-%20Comment%20Letter-%20Volcker%2011-5-10.pdf, "Prohibition on Proprietary Trading and Certain Relationships With Hedge Funds and Private Equity Funds" (Feb. 13, 2012) *available at* http://www.bettermarkets.com/sites/default/files/SEC-%20CL-%20Volcker%20Rule-%202-13-12.pdf, "Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Covered Funds (Apr. 16, 2012) *available at* http://www.bettermarkets.com/sites/default/files/CL%20CFTC%20FINAL%20Volcker%20Rule%204-16-12.pdf, and "Prohibition on Proprietary Trading and Certain Relationships with Hedge Funds and Private Equity Funds (June 19, 2012) *available at* http://www.bettermarkets.com/sites/default/files/SEC-%20CL-%20Supplemental%20Letter%20on%20Volcker%20Rule%206-19-12.pdf.

[3] Better Markets did a comprehensive review of the costs of the crisis and, using lost and avoided lost GDP, concluded that the cost of the crisis will be no less than $12.8 trillion. See BETTER MARKETS, THE COST OF THE WALL STREET-CAUSED FINANCIAL COLLAPSE AND ONGOING ECONOMIC CRISIS IS MORE THAN $12.8 TRILLION (Sept. 15, 2012)("Cost of Crisis Report"), *available at* http://bettermarkets.com/sites/default/files/Cost%20Of%20The%20Crisis_0.pdf.

in the 2008 financial crisis, is the equivalent of Russian roulette for any other firm or business in America where bad bets mean bankruptcy and, often, losing everything. The only place in American that doesn't happen is Wall Street: the biggest banks know that, if their bets lose and the roulette bullet hits them, they don't die or go bankrupt. Rather, the taxpayers will pick up the bill for their losses and prevent their failure, as demonstrated in the 2008 crisis.

And, that bill can be gigantic. Any unbiased analysis shows that the costs of the last financial crisis to the United States alone have been in the trillions of dollars, with many continuing to this day as the worst recession since the Great Depression ravages the country.[4] Depending on when it happens and what form it takes, the next financial crisis will likely cost at least as much, if not significantly more.

Those massive and debilitating costs are what financial reform generally and the Volcker Rule in particular are intended and designed to eliminate or reduce. The American people should never again have to pay trillions of dollars for another Wall Street bailout due to its reckless trading and investment activities.

Notwithstanding a relentless, comprehensive disinformation campaigns, implementing the Volcker Rule is not complex or difficult. The two keys are:

1. Focusing on compensation to break the link between proprietary trading and banker bonuses (via the bonus pool);
2. Backing up the law with swift, certain and significant penalties for traders, supervisors and executives; and

If the link between proprietary trading and banker bonuses is removed, then the incentive for proprietary trading will be gone. This can be readily accomplished by requiring that all compensation for the permitted activity of market making, for example, to be limited to the historic, well-known and free market, industry determined methods of fees and commissions.

This can then be easily policed after the fact by analyzing the bonus pool – after all, that is the entire purpose for proprietary trading: getting the biggest bonuses possible. Nothing is tracked more carefully on Wall Street than the bonus pool, which is a roadmap to where every penny was made or lost. Conveniently, this can be cross-referenced by the many individuals and desks that assiduously track this.

Because proprietary trading is banned and illegal, the firm cannot be allowed to profit from it either. A real market maker's trading book is fully hedged and, therefore, does not generate profits in excess of fees and commissions (other than in rare and extraordinary market conditions, when gains are as probable as losses, and either should be consistent industry wide). If such profits are somehow generated anyway, then

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[4] See Better Markets' Costs of the Crisis Report, cited above note 3.

increased prudential standards must be applied to bring the bank back into compliance with the law.

Some who attack the Volcker Rule say that is not possible to distinguish between proprietary trading and market making for customers. This is a very dubious claim given the oft heard claim that the smartest people on the planet work on Wall Street (and get paid unprecedentedly high compensation for being so smart). If they can't distinguish between proprietary trading for their own pocket and trading for their customers, then a very thorough investigation of their businesses is required and quickly. The logic of this argument against the Volcker Rule is that the banks today do not and cannot comply with the most basic investor protection rules regarding client funds as well as basic rules relating to risk, capital and legal compliance.

Importantly, limiting all trading compensation to fees and commissions will not be enough to end illegal proprietary trading. There is simply too much money at stake, especially bonus money, to expect people to follow the law unless there are very significant penalties for violating the law and a reasonable expectation that they will be caught. Those penalties have to be as significant as the potential gains if they are to be effective. If not, the cost of violating the law will become a cost of doing business and the illegal profits from proprietary trading will continue to flow, albeit diminished for the rare or occasional paltry fine. Even worse, the destabilizing risks that the Volcker Rule is intended to reduce or eliminate will remain, threatening our financial system, our taxpayers, our treasury and our economy. That is why very substantial penalties must be spelled out in the rule or it will be rewarding illegal conduct and inviting systemic risk.

The Volcker Rule is a reasonable response to a foreseeable and severe threat that materialized in the last crisis and contributed to systemic failure, which precipitated massive bailouts. Avoiding those trillions of dollars in costs (not to mention the equally high human costs arising from unemployment, foreclosure, etc.)[5] or, put another way, gaining the benefits of avoiding such a crisis, are why it is so important to implement the Volcker Rule as strong, effective and quick as possible.

Thus, for the reasons detailed below, the Volcker Rule is unlikely to reduce liquidity of U.S. capital markets, make it more expensive for businesses and consumers to borrow, depress the price of financial assets, impede the ability of U.S. financial institutions to compete against their foreign counterparts or dampen U.S. economic growth. To the contrary, removing the threat posed by these biggest too-big-to-fail banking giants to our financial system and economy is likely to unleash a renaissance in our financial industry as transparency, competition, and fairness create untold opportunities for current and new market participants. That will be good for our markets, financial system, economy, taxpayers and, indeed, the entire financial industry.

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5 *See* Better Markets' Costs of the Crisis Report, n. 3 above.

The High Risk and Dangers of Proprietary Trading

There are many concrete examples of the dangers of speculative proprietary gambling by big systemically significant banks. While most examples relate to the too big to fail banks gambling their **own** or borrowed money, the most recent publicly disclosed example of a speculative prop trading going wildly wrong is JP Morgan's loss from trading by its Chief Investment Office (CIO) in London, the so-called "London Whale" trading debacle.[6] In this case, **JP Morgan gambled with federally insured depositors' money**, reportedly more than $100 billion of federally insured depositors' money.

JP Morgan's Multi-Billion Dollar London Whale Loss Due to High Risk Speculative Trading with Federally Insured Deposits

The recently reported trading by JP Morgan London whale would have violated the letter and not just the spirit of the law and proposed Volcker Rule if it were in effect. First, given the enormous net gains (reportedly 25% of the bank's net income for 2010) and losses (which now reportedly could be as high as $9 billion[7]) arising from this trading activity, it cannot properly be described as "hedging." And, given the swings in net profits and losses, it cannot properly be characterized as "**risk-mitigating** hedging," which is the definition of the permitted activity in the law and the rule.[8]

Moreover, it has been widely reported that JP Morgan's CEO personally transformed the CIO from a low-risk, highly liquid actual hedging operation into a high risk, speculative "profit seeking" operation; real "risk-mitigating hedging" does not generate net profits, which is what the CEO reportedly structured and staffed the CIO operations to create.[9]

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6 *See* April 6, 2012, Wall Street Journal, page A1, "'London Whale' Rattles Debt Markets" and April 10, 2012, Bloomberg, homepage, "Making Waves Against the 'Whale.'" These articles provided specific details about the London CIO's high risk trading, how it was being done, who was doing it and that billions in losses were possible. On April 13, 2012, JP Morgan's CEO and CFO held an earnings call for the bank's first quarter results and emphatically dismissed these reports as inaccurate and provided comprehensive comfort to the public, regulators and investors. In fact, CEO Jamie Dimon said the reports were nothing but a "tempest in a teapot." Almost thirty days later, on May 10, 2012, Jamie Dimon disclosed, among other things, that the Wall Street Journal and Bloomberg reports from a month prior were in fact accurate.

7 The actual gross losses thus far appear to be $6.2 billion, but JP Morgan disclosed that the losses could be as high as $9 billion. However, that is an incomplete picture of the losses created by this speculative high risk trading: JP Morgan's lost about $20 billion in market capitalization when this trading loss was first disclosed (and when the loss was said to be only about $2 to $3 billion). Added to that is more than 850 million shares of JP Morgan stock that was traded between the first press reports of the London Whale trades in early April 2010 and JP Morgan's first public admission that those reports were largely accurate about 30 days later. The net result is real, multi-billion losses for investors in addition to the actual losses from the trading.

8 "(C) Risk-mitigating hedging activities in connection with and related to individual or aggregated positions, contracts, or other holdings of a banking entity that are designed to reduce the specific risks to the banking entity in connection with and related to such positions, contracts, or other holdings."

9 "Dimon pushed [the CIO], which invests deposits the bank hasn't loaned, to seek profit by speculating on higher-yielding assets such as credit derivatives, according to five former executives. The CEO suggested positions, a current executive said. Profits surged over the next five years as assets quadrupled to $356

(While losses and profits may be generated, they should be largely offsetting, resulting in little net profit or loss, as discussed further below.) It was also reported that "the CIO… housed a lot of former traders from the bank's proprietary trading business, according to people who work there."[10] This personnel shuffle and hide-and-disguise "rebranding" of prop traders and trading was a key concern when the legislation was drafted and when the rule was proposed. Nonetheless, that is what is reported to have happened here and at the direction of the CEO.

In addition, the JP Morgan CIO's trading certainly involved "high-risk assets" and "high-risk trading strategies," which are also expressly prohibited by the law.[11] This is proved not only by the net profits and losses generated, but also by the fact that the CIO had to wager vast amounts of money to create those profits and losses, reportedly involving hundreds of billions of federally insured depositors' dollars. The CIO had, by the CEO's admissions, more than $350 billion under its control and much of that was apparently bet by the "London Whale" seeking to make a big splash and get a huge bonus, if not other rewards. Further proving the high-risk nature of these assets and trading strategies, they apparently involved relatively illiquid securities because the bank couldn't exit the investments in any reasonable period of time to minimize its losses. This too would violate the law and rule.

As if all that wasn't enough to demonstrate beyond a doubt that JP Morgan's trading would have violated the law and rule if they were in effect, it is also the case – as the CEO himself has admitted – that those very high risks were unknown to the bank; the bank's CEO, CFO, and other executives; as well as being unknown to the banks' risk, capital, legal and operational management.[12] The narrow permitted activity of "risk-mitigating hedging" cannot, by definition, occur by accident, which is why the proposed rule has detailed procedures to establish that such hedging is in fact risk mitigating and in fact bone fide (although, as set forth in Better Markets February 13, 2012 comment letter, those procedures need to be strengthened).

The fact that this particular example of high risk speculative proprietary gambling with federally insured depositors' money did not result in a loss to those depositors or require a federal bailout is irrelevant to the consideration of the Volcker Rule. First, it

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billion and employees were given proprietary-trading accounts, current and former executives said." Dimon Fortress Breached as Push from Hedging to Betting Blows Up, Bloomberg, May 14, 2012.

10 "How JPMorgan Shock Hit the War on Volcker," Financial Times, May 11, 2012

11 The Volcker Rule prohibits, among other things, any "transaction, class of transactions or activity … if the transaction, class of transactions or activity … would result, directly or indirectly, in a material exposure by the banking entity to high-risk assets or high-risk trading strategies …."

12 The accuracy of these claims is still being investigated and there are a number of reasons to conclude otherwise: "Staff from the bank's investment banking arm privately told management – including chief executive Jamie Dimon – that the bank's CIO was an 'accident waiting to happen.'" JP Morgan's $2bn loss was an 'accident waiting to happen,' The Telegraph, May 11, 2012; see also, "JP Morgan Pressed by SEC on Prop Trading Before Whale Loss," Bloomberg, December 11, 2012; JP Morgan's CEO Jamie Dimon: Incompetent or Culpable? http://bettermarkets.com/blogs/jp-morgan%E2%80%99s-ceo-jamie-dimon-incompetent-or-culpable#.UMiduYPAdyw ; Questions for Jamie Dimon's House Testimony, http://bettermarkets.com/blogs/questions-jamie-dimons-house-testimony#.UMitMYPAdyw

appears to be largely accidental that JP Morgan management even found out about this massive betting when it did: press reports brought it to their attention. Absent that, there's no reason to conclude that this trading loss would have multiplied many times over before it was discovered by management. That is what happened to the Barings Bank in 1995, which lost $1.3 billion and collapsed after 233 years, and the recent UBS $2 billion loss, among many others. Traders in big losing bets usually double down if presented with the opportunity.

Second, there is no reason to believe that the next prop trade gone bad will result in non-lethal losses either before or after doubling down. Third, letting after the fact losses influence before the fact policy making would be to turn law-making on its head. Fourth, as set forth below, there are plenty of examples of prop trading gone bad that were lethal or almost lethal but for federal rescues and bailouts.

Citigroup's Speculative Proprietary Trading Caused More Than $40 Billion in Losses

The damage inflicted on Citigroup by its broker dealer subsidiary vividly illustrates the threat that proprietary trading poses to even the largest banks. During the run-up to the crisis, Citigroup traders were among the largest creators and sellers of collateralized debt obligations ("CDOs"). The CDO business required traders to acquire a pool of assets, "structure" a new set of securities based on that pool, and then sell some or all of these newly structured securities to third parties. Creating and pricing the new securities required some expertise, but at its heart the CDO business was a convoluted proprietary trade in which the traders acquired assets, held them as inventory and planned to resell them later at a higher price.[13]

These CDO securities differed in their credit ratings, the rate of interest paid to investors and in their payment priority in the event of default. The quantity and characteristics of each class of security were chosen by the Citigroup traders to maximize their profits. They found it profitable to create a class of "Super Senior" securities which were nominally highly-rated and which paid relatively low interest rates. Citi traders found that investors were unwilling to buy the Super Seniors. But instead of offering the securities at a lower price and higher interest rate – which would have required lowering the rates paid on the other CDO securities and reduced their price – the Citigroup traders

[13] The securities comprising the CDO asset pools were varied – including RMBS, high grade bonds, and tranches from other CDOs. However, many of the underlying securities were constructed from subprime residential mortgages. The Office of the Controller of the Currency estimates that 70 percent of the assets underlying Citigroup CDO's issued between 2003 and early 2006 were subprime-related. *See* U.S. Office of the Comptroller of the Currency (2008). Memo from John Lyons, Examiner-in-Charge, Citibank, N.A., Subject: Subprime CDO Valuation and Oversight Review – Conclusion Memorandum, July 17, 5. *Available at* http://fcic.law.stanford.edu/resource/index/Search.Videos:0/Search.Documents:1/Search.endmonth:02/Search.endyear:2012/Search.Footnotes:10.42

continued to create Super Seniors and to hold them. They would only have created and held unsalable Super Senior securities to maximize their overall returns.[14]

To boost the return from holding the Super Senior positions, Citigroup relied on leverage. During 2003 and early 2006, Citigroup financed $25 billion in Super Senior securities through conduits. These special purpose vehicles ("SPVs") issued asset-backed commercial paper, for which Citi provided "liquidity guarantees." The guarantees meant that Citi would buy the commercial paper issued by the conduit if no one else would.[15] Liquidity guarantees meant that third party purchasers of the commercial paper faced default risk only if Citigroup itself failed to honor its guarantee, regardless of the market value of the Super Senior securities.

Citigroup ceased to issue liquidity guarantees in early 2006. However, between early 2006 and August 2007 another $18 billion in Super Senior securities were added directly to Citigroup's trading book positions. Because the securities were held in the trading account, little or no capital was required to back them.[16]

In late 2007 it became clear that the Super Senior securities were worth far less than their face value. To avoid having to make good on its liquidity guarantees, Citigroup bought $25 billion of commercial paper that had been issued by the Super Senior conduits, and placed those Super Senior securities on the books of the Citigroup commercial bank.

Beginning in November 2007, Citigroup was forced to recognize huge losses on the Super Senior securities and other positions.[17] In a remarkably understated 2007 annual inspection report on Citigroup, the Federal Reserve Bank of New York observed that "[m]anagement did not properly identify and assess its subprime risk in the CDO trading books, leading to significant losses. Serious deficiencies in risk management and controls were identified in the management of Super Senior CDO positions and other subprime-related traded credit products." [18] **By the end of 2008, Citigroup had written**

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14 The Comptroller of the Currency recognized this motive for the Citigroup trading strategy in its January, 2008 review of Citigroup's CDO-related losses, noting that "The bank built up [Super Senior] positions because they are hard to sell in the primary issuance market at the nominal spreads available for [Super Senior] once deals were completed (10-20bps) and the bank was unwilling to give up some of the inception profits. " *See* Ibid.

15 The amount of leverage on the Citi conduits is not clear from available data. If the SPVs were entirely financed by commercial paper, the leverage was infinite.

16 Financial Crisis Inquiry Commission (2011). Final Report of the Financial Crisis Inquiry Commission, U.S. Government Printing Office, 196-197.

17 Citigroup, Inc. (2007). Press release, November 4 (announcing losses of approximately $8 billion to $10 billion), *available at* http://www.sec.gov/Archives/edgar/data/831001/000110465907079495/a07-28417_1ex99d1.htm

18 Federal Reserve Bank of New York (2008). Summary of Supervisory Activity and Findings for Citigroup, January1, 2007 – December 31, 2007, 5, *available at* http://fcic.law.stanford.edu/resource/index/Search.keywords:fcic-085390/Search.Videos:0/Search.Documents:1/Search.Interviews:0/Search.endmonth:02/Search.endyear:2012

off $38.8 billion related to these positions and to ABS and CDO securities it held in anticipation of constructing additional CDOs.[19]

These losses reduced Citigroup's capital, helped to bring the company to the brink of failure, and made a massive federal rescue necessary. Indeed, Citigroup was the largest single recipient of federal emergency assistance and required a total of $476.2 billion, including capital injections, debt guarantees, and asset guarantees, to prevent it from failing.[20]

Citigroup was also the heaviest user of the Term Securities Lending Facility ("TSLF"), and a very heavy user of the Primary Dealer Credit Facility ("PDCF"), two emergency lending facilities set up to halt a destabilizing collapse of broker dealers generally. Reliance on these facilities indicated that a broker dealer was having difficulty funding its positions in repo markets. So the fact that Citigroup went to the PDCF 279 times for overnight loans averaging $7.2 billion each, and used the TSLF to execute 43 swaps of "investment grade" collateral averaging $3.7 billion each, are clear signs that its broker dealer was in a very difficult shape. (See attached Appendix 1, below). The debacle at Citigroup is merely illustrative of the harm that bank proprietary trading produced and threatened to produce. The heaviest users of TSLF and PDCF funds includes several other bank-based broker dealers, among them Bank of America, Deutsche Bank, Credit Suisse and Barclays. (See attached Appendix 2, below). Although they did not create wreckage on the scale of Citigroup, they were clearly on the brink of doing so.

Other Too Big To Fail Banks High Risk Speculative Prop Bets Gone Wrong

JP Morgan and Citigroup were not alone in making gigantic, high risk, highly leveraged proprietary bets. Indeed, as was made visible during the crisis, trading assets made up a large proportion of total assets at all of the large stand-alone securities firms and all came under extraordinary pressure as the crisis spread. A major source of that pressure was losses and conjectured losses on their proprietary trading positions. For example:

- In June 2007, two Bears Stearns managed hedge funds – High-Grade Credit Fund and High-Grade Structured Credit Enhanced Leverage Fund – collapsed because of failed subprime mortgage trades. Bear was forced to rescue the funds by injecting more than $3 billion.[21] As a result market participants became increasingly concerned about Bear's solvency, and its repo lenders, on whom Bear was increasingly dependent, began to require more collateral

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19 *See* Citigroup, Inc., Form 10K for the period ending December 31, 2007, 48; Form 10K for the period ending December 31, 2008, 68.

20 *See* Special Inspector General for the Troubled Asset Relief Program (2011). Extraordinary Financial Assistance Provided to Citigroup, Inc., January 13.

21 http://www.nytimes.com/2007/06/23/business/23bond.html?pagewanted=all.

for loans. In March 2008, there was a run by Bear's repo lenders and over-the-counter derivative counterparties, and the firm failed.[22]

- In October 2007, Morgan Stanley recognized a $9 billion loss on proprietary trades related to subprime mortgages.[23] That loss forced the firm to obtain an equity injection of $9 billion from Mitsubishi UFJ to prevent failure and bankruptcy. Ultimately Morgan Stanley had to seek safety net protection by becoming a bank holding company to avoid failure.

- In mid-2008, Lehman Brothers began to publicly recognize significant losses. A major fraction of those losses came from proprietary positions Lehman had taken in subprime and Alt-A mortgages, in a belief that it would be able to securitize and sell them at a profit. Between the first quarter of 2007 and the third quarter of 2008 Lehman lost an estimated $7.4 billion on these proprietary positions.[24] In September, Lehman's repo lenders and over-the-counter derivatives counterparties concluded that the firm was no longer solvent, and the resulting run caused Lehman to fail.[25]

The Financial Crisis Inquiry Report summarizes role of proprietary trading at the stand-alone investment banks as follows:

> Lehman's collapse demonstrated weaknesses that also contributed to the failures or near failures of the other four large investment banks: inadequate regulatory oversight, risky trading activities (including securitization and over-the-counter (OTC) derivatives dealing), enormous leverage, and reliance on short-term funding. While investment banks tended to be initially more vulnerable, commercial banks suffered from many of the same weaknesses, including their involvement in the shadow banking system, and ultimately many suffered major losses, requiring government rescue.[26]

Banks Have Failed to Offer Empirical Evidence – To Which They Have Unique Access – To Support Their Claims about Market Making, When They Are Also Uniquely Incentivized to Do So if that Evidence in Fact Supports Their Claims

Banks have claimed that when they act as market makers they must hold substantial inventories of infrequently traded assets. Because these assets trade rarely, they say, continuous observable bid-ask spreads do not exist. In practice, they claim, market making in these assets is only possible because they can earn revenues from the

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22 National Commission on the Cause of the Financial and Economic Crisis in the United States, The Financial Crisis Inquiry Report (2011), New York: Public Affairs, 280-92.

23 http://www.nytimes.com/2007/12/20/business/20wall.html?pagewanted=all.

24 Report of Anton R. Valukas, Examiner, In re Lehman Brothers Holdings Inc., et al., (2010), 84-94.

25 National Commission on the Cause of the Financial and Economic Crisis in the United States, op. cit., 327-333.

26 *Ibid*, 343.

price changes on the positions they hold. Therefore, using the existence of a bid-ask spread or revenue from the bid-ask spread as indices of market making will drive them from their market making role.

For example, Morgan Stanley claims that because market makers must hold inventories of large or illiquid assets for "days, weeks or months," they must necessarily have "substantial revenues from market movements in their principal positions." [27] Citigroup Inc. says that in "all but the most liquid portions of the equity, rate and foreign exchange markets, profitability from bona fide market-making-related activity is significantly derived from price appreciation of inventory positions."

If Morgan Stanley or other banks really wanted to inform us about how market making works, they would have presented verifiable data to answer some basic questions about their business. For example, with respect to corporate bonds, for which bonds are they market markers? Which of these bonds are infrequently traded, and which are frequently traded in the market as a whole? For which of these bonds do they typically hold inventories, and for which of them do they meet client demand by acting as agents or brokers? For those bonds in which they maintain positions, how large are their inventories? For which of the bonds in their inventory is there an observable bid-ask? How much of their trading revenue comes from frequently traded bonds for which there is an observable bid-ask? These and other relevant data are not forthcoming from the banks.

When data are offered, they are often beside the point. Morgan Stanley, for example, in an appendix to its February 13, 2012 comment letter on the proposed rule, provides descriptive statistics on the frequency of bond trades during 2009. However, these data are derived from TRACE, a publicly available source. Such data tell us nothing about the actual market making activity of Morgan Stanley or any other large bond trader.

These data provide **no** evidence that Morgan Stanley actually holds inventories of any of the infrequently traded bonds identified in the appendix, nor do they tell us anything about the availability of bids and asks for frequently traded bonds. The failure of the banks to provide meaningful data in their exclusive possession, and their focus on data that are irrelevant to the issues being discussed, leaves regulators with **no** data supporting their assertions.

Given that they are self-interested market participants with the unique ability to support their claims with data, but chose not to, there is no defensible conclusion other than such data does not exist or, more likely, is not supportive. After all, if their claims

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[27] Comment Letter on the Notice of Proposed Rulemaking Implementing the Volcker Rule – Proprietary Trading, from C. Kelleher, Co-President, Institutional Securities Group, and J. Rosenthal, Chief Operating Officer, Morgan Stanley. February 13, 2012, 4 ("Morgan Stanley Comment Letter"); Comment Letter on the Joint Notice of Proposed Rulemaking Implementing the Volcker Rule, from Brian Leach, Chief Risk Office, Citigroup. February 13, 2012, 4 ("Citigroup Comment Letter").

were correct, it obviously would be in their interest to support their case empirically. They chose not to. Legislators, regulators and policymakers have no choice but to disregard such unsupported assertions and claims under such circumstances.

Independent Evidence Contradicts Bank Claims about Market Making for Corporate Bonds

Claims made about the market for U.S. corporate bonds – a market which banks have cited in their arguments that large scale asset inventories and revenue from price appreciation are essential to market making [28] – are contradicted by independent academic research.

A recent scholarly article, for example, suggests that dealers hold only small inventories of bonds that are frequently traded and no inventories of bonds that trade infrequently:

> "One argument against proposals to increase transparency in a dealer market is that dealers will become reluctant to enter trades as principals – that is, by themselves, purchasing bonds from customers or selling customers bonds owned by the dealer – and instead will only be willing to work orders on an "agency basis" – that is, they will search for potential counter parties (Genmill, 1996). In interviews, numerous corporate bond market participants voiced similar concerns. **We were told that, post-TRACE, bond dealers no longer hold large inventories of bonds for some of the most active issues; for less active bonds, they now serve only as brokers.** As noted, individual corporate bond issues trade on average only two or three times per day, and for illiquid issues even less often. With trade reporting, it may be possible to ascertain when a dealer may have taken a large position into inventory, and the price paid. Knowledge of the dealer's inventory may allow market participants to forecast upcoming trades the dealer will undertake to rebalance inventories, and these forecasts may in turn cause price movements adverse to the dealer." [29] [emphasis added]

A second empirical study, using data from a sample of traded corporate bonds, also indicates that dealers avoid holding inventories of infrequently traded bonds.[30]

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[28] Comment Letter on Restrictions on Proprietary Trading and Certain Interests in and Relationships with Hedge Funds and Private Equity Funds, from J. F. W. Rodgers, Chief of Staff, Goldman Sachs Group, Inc., February 13, 2012, 12; Morgan Stanley Comment Letter, op. cit.,4, appended Discussion Materials; Citigroup Comment Letter, op. cit.

[29] H. Bessembinder and W. Maxwell (2008). Transparency and the Corporate Bond Market. Journal of Economic Perspectives, Volume 22, Number 2, 217-234, 228.

[30] M. Goldstein et al. (2007). Transparency and Liquidity: A Controlled Experiment on Corporate Bonds. The Review of Financial Studies. Volume 20, Number 2, 235-273. In the sample used in this study

Sample data show that when infrequently traded bonds are added to dealer inventory, they are held for shorter periods than frequently traded bonds, and the entire position is more frequently sold off to buyers. The authors conclude that for infrequently traded bonds "… **dealers may serve more of a search role, matching buyers and sellers, and not assuming the risk of holding bonds in their inventory**." [emphasis added] [31]

It is important to emphasize that even after TRACE was introduced, post-trade bond prices became widely available, and bond traders reduced their inventories of infrequently traded bonds, the market for corporate bonds did not vanish. Between 2002, when TRACE was introduced, and 2006, the average daily trading volume for corporate debt increased from $18.9 billion to $22.7 billion.[32] Market makers continued to flourish, although their ability to extract rents from their counterparties was reduced.[33]

There are other recent examples, not directly related to market making, that illustrate how profit opportunities prompt rapid entry and adaptation in financial markets. When regulation NMS reduced regulatory barriers to entry for electronic market centers, there was rapid entry of new trading platforms and an increase in competition. As a recent academic study notes:

> Regulation NMS freed electronic trading platforms to compete with the NYSE. Subsequently, new entrants gained significant market share. The NYSE market share of volume in its listed stocks fell from 80% at the beginning of 2003 to 25% by the end of 2009. NASDAQ matched share volume also increased, but later fell as volume traded through new entrants such as BATS and DirectEdge increased.[34]

Entry of new trading firms has been facilitated by technological and conceptual developments that have fostered the creation of high frequency trading ("HFT"). One of the distinguishing features of HFT is that is can be executed with relatively small amounts of capital. Positions are held for very short time periods, and the books of HFT firms are typically flat at the end of the day.[35] Because this overcomes the cost advantage of the

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frequently traded bonds are defined as those that trade at least once per week. Infrequently traded bonds trade less than once every two days, but at least once every two weeks.

31 *Ibid*, 267.

32 Bessembinder, op. cit., 222.

33 After the implementation of TRACE, transactions costs for corporate bond trades declined. *See* Bessemer and Maxwell, op. cit.; Goldstein et al., op. cit.; A. Edwards et al. (2007). Corporate Bond Market Transparency and Transactions Costs. Journal of Finance, Volume 19, Number 1, 69-90.

34 J. Angel et al. (2010). Equity Trading in the 21st Century, USC Marshall Research Paper FBE 09-10, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1584026.

35 Technical Committee of the International Organization of Securities Commissions (2011). Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency, Consultation Report CR0211, July, 21, *available at* www.iosco.org/library/pubdocs/pdf/IOSCOPD354.pdf.

established dealers, including those located in the LBHCs, numerous HFT firms have entered an activity in which bank dealers once played a more prominent role.[36]

Another classic example of competitive entry in response to newly created profit opportunities is the events following the passage of the Glass-Steagall Banking Act, passed in 1933 during the Great Depression. The Banking Act required commercial banks to exit from investment banking (including underwriting and trading) one year after enactment. Commercial banks divested their investment banking operations, thereby creating profit opportunities for new entrants. New investment banks were quickly formed, often employing the experienced personnel formerly located in the commercial banks.

> As Vincent Carosso notes in his historical study of investment banking:
>
> A major reorganization of the investment banking industry immediately resulted from the Banking Act. Affiliations were eliminated; the bond departments of commercial banks were cut in size and their activities greatly reduced; and private bankers were forced to choose between deposit and investment banking….
>
> Implementation of the Banking Act also led to the organization of new investment firms. Most of these were officered and staffed by the individuals formerly associated either with security affiliates or with private banks that had decided to give up the security business. The First Boston Corporation, one of the largest and leading underwriting

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[36] This example is an illustration of market entry when a profit opportunity presents itself. We do not here make a judgment regarding whether this particular entry, HFT, was good or bad for the markets, in whole or in part. See, e.g., S. Arnuk, and J. Saluzzi (2012). Broken Markets, Pearson Education LTD: FT Press. *See also,* Comment Letters of Better Markets: "Requirements for Derivatives Clearing Organizations, Designated Contract Markets, and Swap Execution Facilities Regarding Mitigation of Conflicts of Interest" (November 15, 2010), 9,18, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=26475&SearchText=, "Antidisruptive Practices Authority Contained in the Dodd-Frank Wall Street Reform and Consumer Protection Act" (January 3, 2011), 2, 4, 7, 9-14, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=26928&SearchText=, "Reporting, Recordkeeping and Daily Trading Records Requirements for Swap Dealers and Major Swap Participants" (February 7, 2011), 1-2, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=27630&SearchText=, "Core Principles and other Requirements for Designated Contract Markets" (February 22, 2011), 3-10, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=27994&SearchText=, "Core Principles and Other Requirement for Swap Execution Facilities" (March 8, 2011), 12-18, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=31238&SearchText= , "Antidisruptive Practices" (May 17, 2011), 2-3, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=42710&SearchText= , "Reopening and Extension of Comment periods for Rulemaking Implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act" (June 3, 2011), 7-8, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=44711&SearchText=, "Clearing Member Risk Management" (September 30, 2011), 5, *available at* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=48477&SearchText=.

> and bond-trading houses since its establishment, is a case in point. Organized on June 16, 1934, as a publicly owned corporation, it was a rare phenomenon among investment banking firms. The First Boston grew out of the securities affiliate of the First National Bank of Boston, with some key personnel also coming from the old Harris, Forbes organization…
>
> In September 1934 three Morgan partners and two from Drexel resigned and organized Morgan Stanley & Co., Inc., an investment banking corporation. **They moved just at the time the securities business was starting to revive**…
>
> Numerous other similar changes occurred in 1934 and 1935, as former officials and associates of security affiliates and partners in private banking houses organized new firms or joined existing ones….[37]

Despite these rapid changes required by the change in regulation, which allowed just one year for total divestiture, the newly configured investment banking industry was able to handle a large increase in underwriting volume that occurred in 1935.[38]

Precisely these types of entry and market adaptions have been happening routinely since the passage of the financial reform law. For example, the Financial Times reported recently that "the former head of proprietary trading at Citigroup," who is also the "former head of proprietary trading at Morgan Stanley," is launching "one of the largest hedge fund start-ups of 2012."[39] This is similar to what has already happened when proprietary traders left JP Morgan Chase and Goldman Sachs, which "has spawned the largest number of hedge fund start-ups in recent years."[40]

Given these examples, there is little reason to believe that there will be a shortage of market making services, even if the Volcker Rule caused the large bank holding company dealers to cease providing them completely. That outcome, however, is unlikely given that the law specifically permits genuine "market making … designed not to exceed the reasonably expected near term demands of clients, customers, or counterparties." Any bank, including the largest banks, can engage in unlimited market making if, for example, it ran a flat book or a truly hedged book, with gains offsetting losses thus eliminating proprietary positions in connection with market making.

Thus, the market can be expected to adapt and the largest banks will provide many of the same services they do now, but in compliance with the law and at much

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37 V. Carosso (1970). Investment Banking in America: A History. Cambridge: Harvard University Press, 372-374. (emphasis added)

38 R. Chernow (1990). The House of Morgan. New York: Atlantic Monthly Press, 390.

39 "Sharma to launch $500m London Hedge Fund," *available at* http://www.ft.com/intl/cms/s/0/94e28e48-b870-11e1-82c8-00144feabdc0.html#axzz1y6Ui5ash .

40 *Id.*

lower risk of failure and taxpayer bailouts, and new market entrants will provide the services that the largest banks choose not to provide.

So contrary to the claims made by banks, the operation of the corporate bond market actually demonstrates that market making does not require that dealers hold significant inventories of infrequently traded assets. Effective implementation of the Volcker Rule, which requires tying permitted trading revenue and compensation to observable bid-ask spreads, will not bring an end to genuine market making by banks. Instead it will limit the ability of banks to take proprietary positions in pursuit of large speculative profits. While banks may object, the banking system will become more stable as a result, which is the ultimate objective of the Volcker Rule.

The Industry's Study is Expressly and Admittedly Incomplete and Should be Disregarded Entirely

The industry has produced and relies on a paper by the consulting firm of Oliver Wyman. Given that the paper was purchased by one of the industry's top lobby and trade associations SIFMA on behalf of the industry, it is no surprise that it agrees with SIFMA's and the industry's position on the Volcker Rule. Like their other arguments, however, the paper is deeply flawed. Better Markets addressed these flaws in its comment letters (specifically in the April 16, 2012 and June 19, 2012 comment letters), but I will briefly address the primary flaw here: Oliver Wyman, without explanations or basis (and contrary to basic economics, facts and history), assumed that there would be no new entrants into the business of market making if the few biggest too big to fail banks stopped making markets as a result of the Volcker Rule (which itself is a highly dubious assumption because market making is an expressly permitted activity and would only require hedging if they wanted to do it or, as the data above suggests, get back to doing it).

Specifically, the Oliver Wyman paper stated that "[w]e do not directly analyze a wide range of potential knock-on effects, including… [t]he potential replacement of some proportion of intermediation currently provided by Volcker-affected dealers by dealers not so affected." As set forth in our comments letters of February 13, 2012, April 16, 2012 and June 19, 2012, there is, however, a great deal of historical and contemporary evidence that entry is the normal market response to profit opportunities like this, including recently in the corporate bond markets.

This should come as no surprise to anyone. After all, the big dealer banks are not nonprofit organizations and do not make markets for free. They do it to make money and because there is money to be made. If they don't make that money, other market participants will move into the business to reap the profits. There is simply no basis to conclude otherwise. Self-serving industry claims contradicted by independent facts, research and history should be disregarded.

Swift, Certain and Substantial Penalties Must be Publicly Imposed on Traders and Management Alike for Any Violations of the Volcker Rule Under a Strict Liability Standard.

The regulatory system for the Volcker Rule **cannot** be constructed to require regulators to find a needle in a haystack when the "needle hiders" are extremely sophisticated, highly motivated and richly rewarded. Of course, they also have vastly more resources and much greater ability to hide and disguise their conduct than the regulatory agencies.

The most senior operating, financial and compliance management at financial institutions must be responsible for full compliance with the Volcker Rule and they must be held accountable for such compliance. It has to be their job to ensure that potential "needle hiders" are supervised, monitored, caught and punished and, if they fail at their job, then management must be punished as well.

This is what the statute contemplates in the "Anti-Evasion" provisions in Section 13(e): the appropriate regulators "shall" issue regulations "regarding internal controls and recordkeeping, in order to insure compliance with this section," i.e., prohibition on proprietary trading. Because senior management is always the first line of defense, these regulations must require that the appropriate officers be directly involved in compliance and be held accountable. Among other things, one or more of these officers should be required to certify periodically that the banking entity has fully complied with the law or that it has promptly disclosed to the appropriate regulators each transaction or set of transactions which violated the law.

Self-policing, self-correction and self-reporting have to be the cornerstone of any effective compliance regime, but that will only work if the most senior management is involved and explicitly accountable.

Also, as contemplated by the statute, strict liability should be the standard imposed for violations of the Volcker Rule. The reason is obvious: anything less will inevitably result in unending disputes, encourage game playing and defeat deterrence.

Indeed, not only does the statute contemplate strict liability, it also requires regulators to order the termination of the activity and/or disposition of the investment. For example, Section 13(e)(2) provides for the "Termination of Activities or Investments" on a strict liability basis: "whenever [a regulator] has a reasonable cause to believe that a banking entity or nonbank financial company supervised by the Board … has made an investment or engaged in an activity in a manner that functions as an evasion of the requirements of this section (including through an abuse of any permitted activity) or otherwise violates the restrictions under this section... **shall order**…[the] terminat[ion of] the activity and, as relevant, dispose of the investment." (Emphasis added)

This explicitly mandated action is in addition to all the other authority the appropriate regulatory agencies have to penalize violations of law. Thus, termination

and/or disposition of the violating trade are **the statutorily minimum** action regulators **must** take.

However, such a sanction by itself would be grossly insufficient to obtain compliance with the law. Indeed, it might actually encourage violations because termination or disposition of the investment merely forfeits the upside, but has **no meaningful downside.**

As is painfully obvious, financial institutions are populated with risk-takers and only by concretely affecting their risk/benefit calculations **before** any violation occurs will there be any hope of compliance with the Volcker Rule.

The Volcker Rule should include a sliding scale of very strong penalties to ensure that violating the Volcker Rule does not simply become a cost of doing business. There must be substantial fines and penalties for any violation of the rule and such penalties must be imposed swiftly. For example, if a regulator has reasonable cause to believe the rule has been violated then it must be empowered to impose immediately an administrative penalty of (1) 10 times the gross profit or loss from the trade, (2) a six month bar on the trader responsible for the trade, and (3) a cease and desist order to the firm. If there is a second violation, then the penalties should double, a preliminary injunction should issue against the firm, and the responsible member of management should be barred for six months from being affiliated with any financial institution.

To ensure compliance and obtain deterrence, while incentivizing a robust comprehensive internal compliance system supported by aggressive management oversight, a financial institution could avoid the penalties only if it detects, corrects and reports the violation to regulators promptly. The institution must also sanction all employees involved in the violation and those sanctions must be publicly reported.

Without very significant sanctions and public reporting, there will be no deterrence and, without deterrence, there will be little compliance with the Volcker rule.

Follow the Money: Bonus Pools and Other Already Collected, Readily Available Data Provide a Roadmap for How the Money is Made and Where the Risks Are.

Financial institutions and their personnel already collect and precisely track, aggregate, analyze and disseminate every meaningful piece of information related to their business, including all trading, throughout the day and at the end of every day, week, month and quarter. Conveniently, it is all electronically gathered, sorted, stored and can be readily transmitted to any appropriate recipient.

Just one example, in an interview with Bloomberg Business Week published in April 2010, Goldman Sachs' CFO said "I personally see the profit and loss statement of each of our 44 business units every single night." You can be sure that the finance officers below him do as well (and they also review every piece of information that gets rolled up into the P&L for their respective business units) because the CFO might call with a

question. And, you can be sure that the CFO's superiors are also routinely reviewing financial information.

This data gathering is particularly true for any activity where the firm's own capital is at risk or might be at risk, which is the case with any proprietary trading. Financial institutions have robust and specific approval and monitoring procedures whenever the firm's capital is put at risk. Importantly, all those processes have comprehensive record keeping requirements at the trade, desk and/or deal level, the business unit level, the finance department level, the management monitoring level and in compliance as well.

Because regulators will be requesting information specific to an institution's businesses and activities, such information should be readily available as a routine matter. Therefore, any institution claiming **not** to have such requested data should be required to report that fact in writing to that institution's Board of Directors, Audit Committee, accountants and lawyers.[41]

Importantly, however, the regulators should not limit themselves to the traditional data gathered and reviewed. For example, one of the most important, and the most illuminating, data collections at every financial institution is the bonus pool as it is assembled month-by-month to quarter-by-quarter to annual finalization and distribution.

Few items receive more or closer attention than the components of the bonus pool. It simply cannot be overstated the amount of time, effort and energy that is directed to assembling, analyzing, designating (prior to year-end) and allocating (at year end) the amounts and recipients of monies in the bonus pool. And, all of this information is gathered and tracked scrupulously by, among others, each person who will be fighting for the largest bonus possible based on their claimed contribution to the firm's profits (and/or other bonus components).

Reverse engineering the bonus pool (as well as the P&L) will show regulators precisely where the money is being made (and lost), by whom and as a result of what activity. This is an invaluable roadmap. The famous saying is as true today as it was decades ago (albeit in a very different context): follow the money and it will lead you to most of the answers you need.

Ending high risk speculative proprietary trading requires eliminating the unimaginably large compensation and bonuses that flow from it and that means aggressively monitoring the bonus pool.

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[41] It is important to remember that the gathering and review of this data in a robust and nimble electronic system is already required by numerous rules, regulations and statutes as well as by compliance and outside auditors (not to mention the Audit Committee). In particular, the outside auditors must annually determine whether the company has an effective and comprehensive system of internal controls.

Appendix 1

Washington Mutual

quarter	Total Assets	Goodwill	Intangibles	Common Equity	Preferred Stock	Tangible Common Equity (TCE)	Tangible Assets (TA)	TCE/TA (percent)	TCE Leverage ratio	Tier 1 capital	Tier 1/(Risk Weighted Assets) (percent)
2007q2	312.2	9.1		24.2	0.5	15	303.2	4.84	20.7	21	7.0
2007q3	330.1	9.1		23.9	0.5	14	321.0	4.48	22.3	20	7.6
2007q4	327.0	7.3		24.6	3.4	14	319.7	4.35	23.0	22	8.3
2008q1	319.7	7.8		22.4	3.4	11	311.8	3.60	27.8	22	8.1
2008q2	309.7	7.3		26.1	3.4	15	302.4	5.10	19.6	21	8.4

quarter	Net Loan Charge-Offs	Other Asset Writedowns	Total Writedowns	Cumulative Writedowns	Cumulative Writedowns (percent)*
2007q2					
2007q3	0.206	1.0	1.4	1.4	0.6
2007q4	0.461	0.3	1.0	2.4	1.0
2008q1	0.765	2.1	1.0	3.4	1.3
2008q2	1.309	3.7	2.0	5.4	1.9
2008q3			29	34.4	11.5

* = 100*(cumulative writedowns/tangible assets 2007q2)

Data from SEC 10Q and 10K's, and FR Y9-C's

Appendix 1, contd.

Citigroup

quarter	Total Assets	Goodwill	Intangibles	Common Equity	Preferred Stock	Tangible Common Equity (TCE)	Tangible Assets (TA)	TCE/TA (percent)	TCE Leverage ratio	Tier 1 capital	Tier 1/(Risk Weighted Assets) (percent)
2007q2	2220.9	39.2	23.0	127.8	0.6	64.9	2158.7	3.0	33.2	92.4	
2007q3	2358.3	39.9	23.7	127.1	0.2	63.3	2294.7	2.8	36.2	92.4	7.3
2007q4	2187.6	41.2	22.7	123.0	1.0	58.1	2123.7	2.7	36.6	89.2	7.1
2008q1	2199.8	43.6	23.9	128.2	19.4	41.3	2132.3	1.9	51.7	99.1	7.7
2008q2	2100.4	43.3	24.5	136.4	27.4	41.2	2032.6	2.0	49.4	106.9	8.7
2008q3	2050.1	39.7	23.5	126.1	27.4	35.5	1987.0	1.8	56.0	137.4	8.2
2008q4	1938.5	27.1	19.8	141.6	70.7	24.0	1891.5	1.3	78.8	118.8	11.9

quarter	Net Loan Charge-Offs	Other Asset Writedowns	Total Writedowns	Cumulative Writedowns	Cumulative Writedowns (percent)*
2007q3	2.6	2	4.6	6.5	0.3
2007q4	3.8	18.1	21.9	28.5	1.3
2008q1	3.8	10.8	14.6	43.1	2.0
2008q2	4.4	7.2	11.6	54.7	2.5
2008q3	4.7	6.5	11.2	65.9	3.1
2008q4	6.2	6.9	13.1	79.0	3.7

TARP Preferred Stock Purchases	TLGP Debt Guarantees	Cumulative Writedowns + TARP + TLGP	Cumulative Writedowns + TARP + TLGP (percent)**
45	31.8	155.8	7.2

* = 100*(cumulative writedowns/tangible assets 2007q2)

** = 100*((cumulative writedowns+TARP+TLGP)/tangible assets 2007q2)

Appendix 1, contd.

Bank of America

quarter	Total Assets	Goodwill	Intangibles	Common Equity	Preferred Stock	Tangible Common Equity (TCE)	Tangible Assets (TA)	TCE/TA (percent)	TCE Leverage ratio	Tier 1 capital	Tier 1/(Risk Weighted Assets) (percent)
2007q2	1,534.4	65.8	8.7	135.8	2.9	58.3	1,459.8	4.0	25.0	92.4	
2007q3	1,578.8	67.4	9.6	138.5	3.4	58.0	1,501.7	3.9	25.9	92.4	8.2
2007q4	1,715.7	77.5	10.3	146.8	4.4	54.6	1,627.9	3.4	29.8	89.2	6.9
2008q1	1,736.5	77.9	9.8	156.3	17.3	51.3	1,648.8	3.1	32.1	99.1	7.5
2008q2	1,716.9	77.8	9.6	162.7	24.2	51.2	1,629.5	3.1	31.8	106.9	8.3
2008q3	1,831.2	81.8	9.2	161.0	24.2	46.0	1,740.3	2.6	37.9	137.4	7.6
2008q4	1,817.9	81.9	8.5	177.1	37.7	48.9	1,727.5	2.8	35.3	118.8	8.9

quarter	Net Loan Charge-Offs	Other Asset Writedowns	Total Writedowns	Cumulative Writedowns	Cumulative Writedowns (percent)*	TARP Preferred Stock Purchases	TLGP Debt Guarantees	Cumulative Writedowns + TARP + TLGP	Cumulative Writedowns + TARP + TLGP (percent)**
2007q3	6.8	2	8.7	8.7	0.6				
2007q4	3.8	18.1	21.9	30.7	2.1				
2008q1	3.8	10.8	14.6	45.3	3.1				
2008q2	4.4	7.2	11.6	56.9	3.9				
2008q3	4.7	6.5	11.2	68.1	4.7				
2008q4	6.2	6.9	13.1	81.2	5.6	45	10	60.6	4.2

* = 100*(cumulative writedowns/tangible assets 2007q2)

** = 100*((cumulative writedowns+TARP+TLGP)/tangible assets 2007q2)

Data from SEC 10Q and 10K's, and FR Y9-C's

Appendix 1, contd.

Wachovia

quarter	Total Assets	Goodwill	Intangibles	Common Equity	Preferred Stock	Tangible Common Equity (TCE)	Tangible Assets (TA)	TCE/TA (percent)	TCE Leverage ratio	Tier 1 capital	Tier 1/(Risk Weighted Assets) (percent)
2007q1	702.7	38.8	1.6	69.8		29	662.3	4.44	22.5	41.5	7.5
2007q2	715.4	38.8	1.5	69.3		29	675.2	4.30	23.3	41.9	7.1
2007q3	754.2	38.8	1.4	70.1		30	713.9	4.19	23.9	43.5	7.4
2007q4	782.9	43.1	2.1	76.9	2.3	29	737.7	3.98	25.1	43.5	7.4
2008q1	808.6	43.1	2.0	78.0	5.8	27	763.5	3.55	28.2	45.4	7.4
2008q2	812.4	37.0	1.9	75.1	5.8	30	773.5	3.93	25.5	49.5	8.0
2008q3	764.4	18.4	1.9	50.0	9.8	20	744.2	2.68	37.3	43.8	7.5

quarter	Net Loan Charge-Offs	Other Asset Writedowns	Total Writedowns	Cumulative Writedowns	Cumulative Writedowns (percent)*
2007q2			0.2		
2007q3	0.2		0.2	0.2	0.0
2007q4	0.5	2.7	3.2	3.4	0.5
2008q1	0.8	2.3	3.1	6.4	1.0
2008q2	1.3	0.9	2.2	8.7	1.3
2008q3	1.9	2.5	4.4	13.1	1.9
2008q4			47.3	60.4	8.9

* = 100*(cumulative writedowns/tangible assets 2007q2)

Data from SEC 10Q and 10K's, and FR Y9-C's

Appendix 2

	All FDIC Insured Institutions	Less than $100 Million	$100 Million to $1 Billion	$1 Billion to $10 Billion	Greater than $10 Billion
number of institutions reporting	7,246	2,342	4,244	553	107
total assets (in billions)	14, 031	135.4	1274.7	1425.9	11, 195.0
percent of all banks		32.3	58.6	7.6	1.5
percent of total assets		1.0	9.1	10.2	79.9

Banks with assets of **$1 billion or less** comprise **91** percent of all banks and hold **10** percent of total assets

Banks with assets of **$10 billion or less** comprise **98.6** percent of all banks and hold **20.3** percent of total assets

Source: FDIC Quarterly Banking Profile, Second Quarter 2012