Global Banking after the Cataclysm

By Roy C. Smith[1]

After many years beginning in the 1970s of continuous, deregulation, global market integration and major advances in telecommunications technology, world financial markets became vast, liquid and efficient. The markets were efficient in the sense that they became easily accessible, were subject to fairly common pricing metrics and were marketable across countries and regions. As a result, global financial markets lowered the cost of capital to governments, corporations and other borrows around the world, allowed risk to be allocated to investors wanting it the most and shifted assets from the balance sheets of banks and insurance companies to institutional investors where they became tradable.

At the end of 2007, the last year before the financial system collapsed, the market value of all tradable securities and loans in the world amounted to $202 trillion, up from $54 trillion in 1990 (see Exhibit 1). Even after the crisis, markets expanded. The value of securities and loans in 2012 was about $222 trillion, approximately ten times greater than the GDP of the United States and the European Union combined, and about 3.5 times global GDP, up from 2.6 times in 1990.

However, changes in investor preferences, caused by fear, greed, or other, more rational, impulses, could create enormous market forces, which would prove to be well beyond the control of governments seeking to stabilize them.

Investment Banks as Intermediaries

Investment banks are the intermediaries in capital markets, acting as underwriters, brokers and dealers (traders), and advisors in merger and other transactions. They have evolved from a large number of relatively small and specialized firms in the 1970s into a small number of very large, diversified firms

[1] Kenneth Langone Professor of Finance, NYU Stern School of Business; working paper dated Dec 30, 2012, not to be cited without permission.

in 2012. [2] The evolution of the industry from low risk advisory firms into high risk, trading intense, multiple-platform, firms has been accompanied by mishaps, scandals, and strategic mistakes amidst two and a half decades of profitable and rapidly increasing capital market activity.

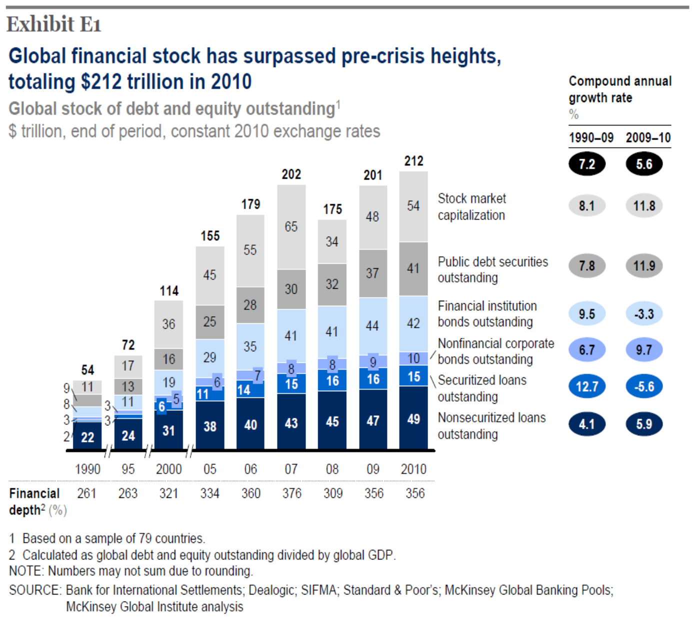

Exhibit 1 – Value of Global Financial Stock

For several large commercial banks focused on servicing corporate or government clients, the investment banking business had not only become attractive for its returns, it was also thought to be essential to their long-term business strategies as capital markets displaced traditional lending businesses. In the US, banks lobbied extensively to remove the 1933 Glass-Steagall law that separated banking and securities businesses. After years of incremental lifting of the barriers, the old law was repealed in 1999-- a year after the otherwise illegal Traveler-Citicorp merger was announced. In Europe, “universal banks” were never restricted in their investment banking activities, though most were never as aggressive as their American counterparts were to become after 1999.

The repeal of Glass-Steagall allowed US banks allowed to cross over into the riskier and, for most, unfamiliar territory of capital markets, they were also

[2] The top ten global investment banks have evolved into what they are today as a result of a long period of mergers and acquisitions, often of failing or weakened firms, in which approximately 40 US investment banks, 12 US money center banks, 10 UK merchant banks and 10 European securities firms were absorbed into ten main players.

permitted to expand rapidly across state lines, with the repeal in 1994 of the McFadden Act of 1927.[3]

Increased Competition

By 2007, the dozen or so “money center” banks of the 1990s had been consolidated into just three very large Bank Holding Companies (Citigroup, JP Morgan Chase, and Bank of America) that engaged in a wide variety of financial services, including investment banking. These institutions, all the result of numerous merger and acquisition transactions, were seen as “too-big-to-fail” – because of their size and importance it was assumed that the government would have to intervene to protect depositors and other liability holders from any sort of run on the bank. This feature was soon reflected in the relatively low rates at which these banks (and others thought to share the designation) were able to fund themselves in the markets.

Basic Business Models Emerge

In the US, the three large commercial/investment banks developed big-balance sheet business models. They offered their lending capacities to corporate clients together with the cross-selling proposition that they also use the banks’ investment banking capabilities.

Big Balance Sheets But for this approach to be convincing to clients, it had to be capable of operating at a large scale – by developing into very large, too-big-to-fail entities, the banks would possess very large legal lending limits, which they could make available to clients seeking to complete large mergers or leveraged buy outs. Such clients, eager to be able to arrange all or most of the financing facilities they needed with one phone call, were willing to insist that the banks be added as co-managers to its investment banking advisers. In time as their skills in investment banking increased, they were able to compete for lead manager roles.

By 2007, Citigroup and JP Morgan Chase occupied the top two market share positions among investment banks. As a result, US investment banks and those Europeans interested in capital markets, had to adapt to the rapidly increasing footprints of these giant US banks by innovation in new products (such as more sophisticated forms of “structured finance” involving collateralized securities), and by a willingness to increase the risk they took in offering transactions to clients.

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[3] An earlier banking crisis occurred in the US in 1984 after the collapse of Continental Illinois Bank, which was deemed to be too-big-to-fail by the Federal Reserve and the FDIC, which took it over after guaranteeing all depositors, lenders and bond holders. This action precipitated the recognition that many other large banks were undercapitalized and in difficulty, several of which were rescued by acquisition by banks from other states, which received waivers from applicable law preventing inter-state banking. As banks recovered from the banking crisis of 1984-1994, they asked for relief from Glass Steagall to be able to compete more effectively. Paul Volcker chaired the Federal Reserve until 1987 when Alan Greenspan, who favored a more open, competition-enhancing regulatory structure for banks, replaced him.

Flow Monsters   Beginning in the 1980s**, t**he stand-alone investment banks evolved into trading firms to take advantage of the opportunities available to them during the Reagan presidency (the rapid increase in US treasury and agency debt outstanding, and the need for market solutions to the Savings and Loan Crisis of that time). As they did so, they became more comfortable with the practice of "bought deals" in which they would offer to purchase an entire block of debt or equity securities, either through an underwriting with a corporate client, or a block-trade with an institutional investor. Taking this risk on their books meant that the firms had to develop exceptionally strong resale capability ("placing power") and the ability to hedge positions they retained. Thus they became large-scale market makers to both issuers and investors in all types of securities, and invested heavily in their market information and sales networks and in technology to support them. With these resources in place, the firms could feel confident that they were "seeing all the order flows" in the markets, and could use the information so derived to manage their positions and inventories. These included "proprietary trades," in which the firm was investing some of its capital, not just to support a client, but for its own reward.

Ten Banks Dominate Markets

The result was that market capacity increased significantly – though this may have been a supply-side phenomenon. In 2006, the volume of global capital

GLOBAL CAPITAL MARKETS SHARE

Firm	Rank 2011	Rank 2010	Global Debt	Global Equity	M&A Advisory	Syndicated Bank Loans	Total	Market Share	Cum Market
JP Morgan	1	1	337658	40149	532637	425277	1335721	10.9%	
Bank of America Merrill Lynch	2	2	284052	52606	385748	401344	1123750	9.2%	
Goldman Sachs & Co	3	3	190081	48038	673086	50661	961866	7.9%	
Citigroup	4	6	251787	32914	370901	270519	926120	7.6%	
Morgan Stanley	5	4	173095	70890	539259	63505	846749	6.9%	43
Barclays Capital	6	5	338600	22411	336478	137292	834781	6.8%	
Deutsche Bank AG	7	7	304756	30087	346252	96729	777823	6.4%	
Credit Suisse	8	8	168662	46992	451817	88736	756206	6.2%	
UBS	9	9	165641	23898	243358	30743	463639	3.8%	
BNP Paribas SA	10	10	193051	4907	118437	121781	438175	3.6%	69
HSBC Holdings PLC	11	12	182140	5818	92450	83213	363621	3.0%	
RBS	12	11	167524	3892	64605	110210	346231	2.8%	
Wells Fargo & Co	13	20	63465	10196	29181	197743	300585	2.5%	
Lazard	14	13			266903		266903	2.2%	
RBC Capital Markets	15	15	76696	8656	90896	67443	243691	2.0%	
Mizuho Financial Group	16	--	14683		57419	152903	225005	1.8%	
Societe Generale	17	14	77633	984	83364	56449	218430	1.8%	
Nomura	18	17	45301	5740	117697		168737	1.4%	
Mitsubishi UFJ Financial Group	19	--	12273			148693	160966	1.3%	
Rothschild	20	16			153759		153759	1.3%	89
Industry Total			**3,933,396**	**606,440**	**3,256,665**	**4,404,959**	**12,201,460**		

Exhibit 2 –Global Capital Market Leaders

market new issues reached a record of $14.7 trillion ($10.2 trillion of securities new issues, and $4.5 trillion of syndicated bank loans). The top ten global capital market banks then accounted for 94% of these and other investment banking transactions (the top 5 had 57%). The top ten banks in 2006 comprised the 3 large US banks, 4 large stand-alone US investment banks (Goldman Sachs, Morgan Stanley, Merrill Lynch and Lehman Brothers), and 3 European universal banks (UBS, Deutsche Bank, Credit Suisse). Since then, the financial crisis resulted in the acquisition of Merrill Lynch by Bank of America, of the US business of Lehman Brothers by Barclays Bank, and of Bear Stearns by JP Morgan. The top 20 firms managing capital market transactions of various types in 2011 are shown in Exhibit 2. In that year of reduced capital market activity, the top five firms (all US banks) accounted for 43% of the total market and the top ten for 69%, well below the market shares of the leaders in 2006.

Cataclysm

The seeds of the financial crisis of 2008 were planted in the government's response to the earlier one of 2000-2002 that followed the collapse of the Internet and related technology "bubble" of the late 1990s. This was the most significant financial crisis since the 1930s – stock prices declined for three consecutive years involving market losses of $8 trillion, or 80% of GDP in 2000; record bankruptcy filings occurred in each of the three years; many corporate officials were arrested or sued for misconduct; and the real economy fell sharply into recession

The first responder to the 2000 crisis was the Federal Reserve -- it lowered interest rates to virtually nothing to stimulate recovery. This act had an unintended consequence – it stimulated prices of residential and commercial real estate where mortgages could be obtained at relatively low rates. Real estate thus became a market that was rising at a time when stock markets and yields on fixed income securities were declining.

The Build Up

Many pension funds, endowments and other Institutional investors had suffered low returns (often losses) from equity markets after 2000, and the market value of their liabilities (subject to Fair Value accounting) rose appreciably due to the drop in the level of interest rates, leaving many with greatly diminished (or negative) capital accounts. To turn this situation around, many such institutions allocated substantial amounts of assets to investments in relatively high-yielding asset backed securities, including "collateralized mortgaged obligations," or CMOs, securities backed by pools of mortgages on real estate many of which were rated AAA, and thus appeared to be safe. The demand for CMOs increased greatly, causing their manufacturers (the banks) to create a large supply of them, in part by increasing the quantity of lower grade, "sub-prime" mortgages placed in the CMO pools. Fees for creating the CMOs in a variety of forms that offered different risk exposures for investors searching for them were substantial, especially for sub-prime instruments. Key to the growth of the CMO structuring business was the development of the Credit Default Swap on asset-backed securities in 2005.

By 2007, $12 trillion of ABS was outstanding (twice the amount in 2000), of these $5.5 trillion were CMOs and other mortgage backed securities that represented 39% of all mortgages. Sub-prime mortgages reached $600 billion in 2006, 80% of which were securitized, as compared to $190 billion in 2001 (50% securitized).[4] In addition to the CMOs there were $6.4 trillion of other Asset-Backed Securities ("ABS") including those backed by credit card, auto loan and other receivables, home equity loans, and Collateralized Loan Obligations (CLOs) issued by banks.

Investors in these various forms of asset-backed securities included hedge funds and private equity funds that had each accumulated $1 trillion of new money (largely from pension funds) after 2000. These investments were sometimes leveraged as much as 10-12 times in hedge funds and on proprietary trading desks of banks.

Investors believed that substantial allocation to asset-backed securities was easily justified by the high-grade credit ratings that many of them carried, by the generous pricing that the securities provided, and by the abundant liquidity that the market seemed to provide.[5] The investors included some of the banks that had created the securities; they had large work-in-process inventories for CMOs under construction, and some decided that the final product should be retained as part of the bank's investment assets.

In late 2006, some investors noticed that residential real estate prices had peaked and begun, contrary to long-term trends, to decline. This weakened the value of the collateral supporting CMOs, but it took some time before the market became apprehensive about the underlying values of the still very active CMO market. By March of 2007 prices of CMOs began to slide, however, creating problems for some hedge funds and other investors. Mark-to-market accounting rules, margin calls and announcements of large write offs at Citigroup, UBS, Merrill Lynch and other banks accelerated concerns, further pushing prices lower.

In it May 2008 Financial Stability Report, the Bank of England, suggested that write-offs taken by banks may have been excessive: using mainstream estimate, fairly pessimistic, estimates of default and recovery rates, the bank suggested that the total pool of mortgage-backed securities then had a fundamental value of 81% of par, yet market prices (based on credit default swap rates) were valuing the securities at 58%. The Bank expected a large wave of buying of CMOs to arbitrage the market – there was some of this, but not enough in the six months

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[4] Roy C. Smith, *Paper Fortunes*, New York, St.Martin's Press, 2010, p. 332
[5] *Ibid,* p. 334. Institutions could earn 150 basis points above their funding costs on AAA CMOs.

prior to the crash of September 2008, to turn markets around. The liquidity in CMOs had basically disappeared. Because the market for mortgage-backed securities had become panic stricken, fearing the securities were all filled with non-performing loans, there were virtually no buyers for the huge supply of bonds offered. The falling prices had frightened investors away, but there were also few creditors willing to lend on margin to those brave enough to be buyers.

Systemic Collapse

The crisis of 2008 began with the nationalization of failing FNMA and FMAC, two enormous federal mortgage institutions that for many years had been subjected to political wheeling-and-dealing, aggressive and shortsighted lending practices, shoddy management, and myopic regulatory oversight. The failure of these two firms accelerated the collapse of the mortgage-backed securities market, and pressure was transferred suddenly to the next most likely victim, Lehman Brothers, a firm that had leveraged itself dangerously to invest in real estate and similar securities. But, after the assisted merger of Bear Stearns (the fifth largest investment bank) into JP Morgan Chase several months earlier, the market assumed that similar treatment would be afforded to Lehman, the fourth largest investment bank. When it wasn't, an avalanche of market forces began as funds were withdrawn from all firms having major capital market businesses.

By the end of 2008, two of the largest US banks (Citigroup and Bank of America) and the largest US insurance company (AIG) had been bailed out by the US government, Lehman Brothers was bankrupt, Merrill Lynch had been driven into an acquisition by Bank of America, and the two surviving stand-alone investment banks (Goldman Sachs and Morgan Stanley) had been converted into bank holding companies. Further, Wells Fargo had rescued one of the largest regional banks (Wachovia) by acquisition, and one of the largest savings-and-loan organizations (Washington Mutual) had been taken over by the FDIC and resold to JP Morgan Chase. Eight major US financial institutions, with assets of more than $8 trillion had either failed outright or had been rescued by government action, all within a space of four months.

In Europe, to which capital markets were integrated with those of the US, similar bailouts occurred: the largest banks in the UK, The Netherlands, Belgium and Switzerland were taken over by their governments. Many other European banks also had to be assisted by their governments. Banks in Ireland, Portugal, and Greece were flattened by the crisis and became wards of their states; these were so large and numerous that they were thought to be capable of bringing their governments down. The Euro-zone sovereign debt crisis involving these countries developed a few years later, in 2010-2011.

These events together constituted the worst and largest global systemic financial collapse the world had ever known. The loss of market value alone in 2008 was $27 trillion. The US and Europe plunged into what has since been called the Great Recession, that lingered for at least five years.

Worldwide, the banks wrote off enormous amounts of capital during the crisis and had to replace it. Market prices dropped well below the securities' risk-adjusted valuation levels, and banks had to write the unrealized losses off against profits and capital.

Altogether, banks worldwide (according to Bloomberg data) wrote off $1.8 trillion in 2007-2009, and issued $1.6 trillion of new capital to replace it. The top ten global capital market banks wrote off $605 billion during this time and raised $536 billion in rights offerings to shareholders, other public offerings and private sales to sovereign wealth funds and other large institutional investors.

Bailouts

In the US, government assistance to banks began in March 2008 when the Federal Reserve guaranteed $30 billion of Bear Stearns' assets in order to induce JP Morgan Chase to acquire the ailing firm. It resumed in September 2008 with the passage of the "Troubled Assets Relief Program" (TARP), to be directed by the Treasury with initially authorized expenditures of $700 billion. The TARP funds were originally intended for the purchase of subprime and other mortgage backed securities in the markets, to provide a pricing floor for them. Soon after its passage, however, the Treasury changed its mind and decided to use the funds to purchase preferred stock of troubled and not-so-troubled banks and for a number of other programs to assist other financial institutions and the automobile industry. The Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), passed in August 2010, reduced the amount authorized for TARP to $475 billion.

Two of the top ten capital market banks received substantial assistance from TARP – both Citigroup and Bank of America received additional rounds of financing after the initial one (all major banks were required by the Treasury to participate in this round) leaving TARP with $45 billion or more invested in each. Altogether, TARP invested $246 billion in the banking industry; by December 1, 2012, it had collected $267 billion in repayments, dividends and other income, while still holding only $8 billion of securities of 229 banking institutions. Financial assistance dispersed to AIG from the TARP and the Federal Reserve Bank of New York, which peaked at $182 billion, was also recovered through repayments, sales and other income. The US capital market banks had all fully repaid their investments from TARP by the end of 2011.[6]

Another of the top ten capital market banks, UBS, was rescued from collapse by the Swiss government which bailed it our to the extent of $38 billion.

Two large investment banks, Goldman Sachs and Morgan Stanley, were encouraged by the Federal Reserve to become Bank Holding Companies (with access to the Federal Reserve discount window) in September 2008. Both banks

[6] US Treasury Dept., *Agency Financial Report, Fiscal Year 2012,* and Jeffrey Sparshott and Eric Morath, "Smaller Banks Sold at a Loss," *The Wall Street Journal*, Dec. 11, 2012.

were then experiencing a surge of selling activity in their common stock, which threatened a loss of confidence and an in ability to roll over their maturing debt obligations. Both investment banks took advantage of the offer, which was speedily implemented.

The Federal Reserve in its market intervention activities gave a much greater amount of support to banks, than was provided by TARP. A Bloomberg report, based on a Freedom of Information Act request, revealed that the Fed committed a historically unprecedented $7.8 trillion in its various efforts to stabilize and support interbank lending, repo, commercial paper markets and money market funds, and mortgage-backed securities during the crisis.[7] These transactions netted out to an increase in the Fed's balance sheet to approximately $2.1 trillion at the end of 2010, from less than $1 trillion before the crisis. Gains on these investments led to net income for the Federal Reserve in 2010 of an extraordinary $76 billion. The Fed's actions, little noticed at the time, constituted the largest financial intervention effort by any government ever to take place.

Regulatory Responses

After most financial crises, market corrections return the system to equilibrium before serious regulatory concerns begin to be contemplated or put into place. After the stock market crash of 1929, and the subsequent Great Depression, a major overhaul of banking and securities regulations occurred in 1933-1934. The bursting of the technology bubble in 2000 inspired the Sarbanes-Oxley Act of 2002, but otherwise, previous crises did not generate major regulatory reforms.

This time, however, major reforms were enacted in the US and elsewhere in major financial centers, and by new entities.

Basel III

Soon after the crisis began, the Basel Committee on Banking Supervision, an organization of central bankers from 27 subscribing countries, met to examine their standards on risk-adjusted capital adequacy standards for banks. The committee was formed in the 1980s to agree a common standard of minimum capital adequacy for banks competing in global markets to minimize risk to the global financial system.

These standards had been revised prior to the crisis, but had not been adequate to prevent the systemic collapse that indeed occurred. Hurriedly the committee met (in 2010 and 2011) to revise the standards again to toughen them up (Basel III). Risk adjustments would be more severe, and the percent of risk-weighted assets to be covered by capital would be increased significantly. Further, additional new standards would be introduced to limit leverage and liquidity risks.

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[7] Thomas R. Eddlem, "Another Secret Federal Reserve Bailout, $7.7 trillion this Time," *Bloomberg Business Week*, November 29, 2011.

These measures would be implemented gradually over a seven-year period ending on January 1, 2019 when total capital requirements (in two "tiers") would increase from 8.0% of risk-weighted assets to 10.5%. At least 6% of the 10.5% would have to be in the form of Tier-1 common equity.

Some banks have calculated that a 6% Basel III Tier-1 ratio is the rough equivalent of a Basel I ratio of 9% or 10%.

As of December 31, 2011, the top ten capital market banks had Tier-1 capital ratios - scored according to Basel I - of 13.8% (all but one had ratios above 12%). These ratios were roughly equivalent to 8% to 9% under the stricter standards of Basel III. All of these banks wanted to demonstrate that they were fully capitalized under current and expected regulations, and to satisfy debt markets that the remained good credit risks, despite the difficult circumstances they were in.

G20 Bank Standards

In 2010, the G20 group of nations (of which the US, Japan and the largest European and Emerging Market countries are members) created a Financial Stability Board. In November 2011, the Board designated 29 global banks as being so important to the global financial system that they must hold more capital than rivals and must put in place a plan ("living wills" due to be in effect by the end of 2012) to allow them to be wound up without taxpayer help if they should get into trouble. Of the banks listed, 17 are from Europe, 8 are U.S. banks[8], and 4 are from Asia.

The G20 also endorsed a core capital requirement *surcharge* (over the Basel III requirement) -- starting at 1 percent of risk-weighted assets and rising to 2.5 percent for the biggest banks -- which must be phased in over three years from 2016. This surcharge is called "Basel 2.5."

Dodd-Frank

Dodd-Frank was signed into law in August 2010. It is a massive undertaking (848 pages, Glass-Steagall was 37 pages) that has been described as reflecting the opinions of outraged members of Congress more so than those of the Treasury or Federal Reserve. It was intended to address and contain systemic risk in the financial system, but the bill went well beyond that. The law essentially was a set of instructions to regulatory agencies to write about 400 new rules for financial markets. By the end of 2012, eighteen months after the bill was passed, only about a third of the new rules, involving approximately 9,000 pages of new regulations, had been completed and the process of implementing the law was way behind schedule. The new rules will replace or extend existing ones, add additional regulations and overlap extensively with the other financial regulatory

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[8] From the US: Bank of America, Bank of NY-Mellon, Citigroup, Goldman Sachs, JP Morgan Chase, Morgan Stanley, State Street, Wells Fargo

bodies. (See Exhibit 3 [9]). By all accounts Dodd-Frank will take several additional years to implement in full, and the cost to the banks of both implementing and complying with it will be very high, though how high no one presently knows.

Dodd-Frank addresses systemic risk in several ways. It designates all US banks with assets of more than $50 billion (about 30) as "systemically important" and requires the new Financial Stability Oversight Council ("FSOC," to which all other financial regulators are meant to report) to designate those nonbanks that are to be regarded as systemically important.

As of December 2012, these designations had not been made. All systemically important banks and nonbanks are to be subject to a requirement to hold more capital against losses than nonsystemically important banks – premium amounts presumably set by Basel 2.5. All banks, however, are to be subject to the Volcker Rule (a part of the Dodd-Frank law which prohibits "proprietary trading" and related activities); the actual rules governing the Volcker Rule had also not yet been released in December 2012, though the were scheduled by Dodd-Frank to become effective in July, 2012. This provision has involved extensive efforts by the banks to persuade the Federal Reserve and other regulators to moderate its terms so as not to prevent the banks from performing their traditional market-making functions for clients.

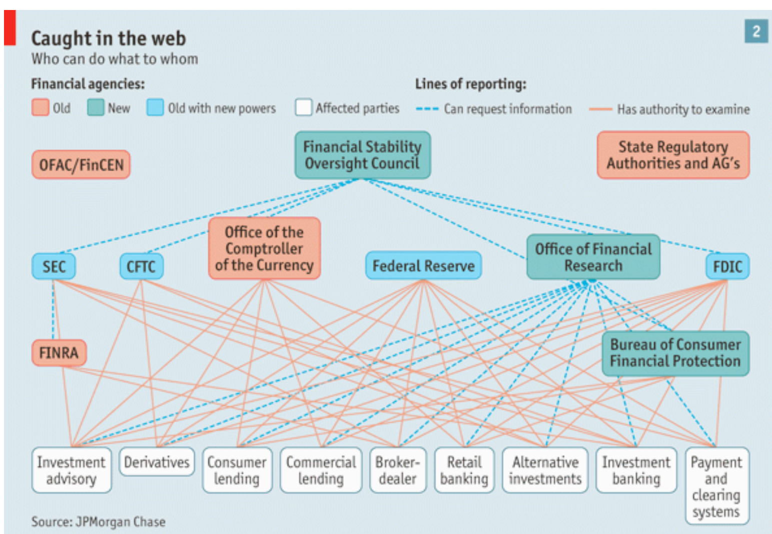

Exhibit 3 – The Reach of Dodd Frank

Similarly rules requiring the trading of derivative contracts on exchanges or clearinghouse platforms were still under development in December 2012. These rules will apply to about 70% of all derivatives trades and most likely will subject banks to margin requirements they did not have to meet while dealing entirely over-the-counter.

[9] "Too Big Not to Fail," *The Economist*, Feb. 18, 2012

Dodd-Frank did not seek to break up the largest banks (though that would have been difficult with these banks on average holding assets of $1.6 trillion; they would have to be broken up into 33 separate banks that would be small enough not be systemically important, i.e., with more than $50,000 in assets), or to re-impose the Glass-Steagall limitations on dealing in securities, which also would be difficult to do when banks can operate freely outside the US.

But it does impose a system for intervention and “risk mitigation” to be undertaken by the FSOC, though bailouts as practiced in the past are no longer to be permitted. The risk mitigation process is cumbersome at best – it requires an official designation of a bank as being a “grave threat” to financial stability (only achieved by a majority vote of the FSOC), which can be challenged in court and appealed, followed by one or more mitigation efforts imposed by the FSOC to be implemented when and as possible. The whole process could take many months, but once a bank has been designated as a “grave threat,” investors in the designated bank (and others like it) will immediately take flight, fearing they will not be protected. In other words, the mitigation process may actually create the run on the bank that the FSOC is trying to prevent. But once the run comes, what can it do but take over the bank through the FDIC? [10]

The Swiss “Finish”

After bailing out UBS, which it did very reluctantly, the Swiss government formed a “Committee of Experts” to advise it on the “too big to fail” problem. The government, as in the UK, was concerned that the country’s largest banks had assets well in excess of the national GDP and Swiss taxpayers were unwilling to guarantee such a large and disproportionate amount under too-big-to-fail conditions. Made up of top regulators, bank executives and other industry experts, the Committee announced in October 2010 that UBS and Credit Suisse, its two largest banks, must hold almost twice as much capital as set out in the Basel III standards. The two banks must hold at least 10% of risk-weighted assets in form of common equity (Tier-1) and another 9% (Tier-2), which could be “contingent convertible” (“CoCo”) bonds, taking the current total capital requirements to 19%.

CoCo bonds are fixed income obligations that convert into common stock if the issuer’s Tier-1 ratio falls below a pre-set limit. Several billion euros of such bonds were issued after 2009 by Credit Suisse, and other European banks, usually with Tier-1 capital conversion triggers of 5% or so. In February 2012, UBS issued $1 billion of “contingent debt” as Tier 2 capital – this debt does not convert to equity, but must be written off if UBS’ Tier-1 capital falls below 5%. In December 2012, Barclays Bank issued $3 billion of similar 10-year bonds that would be written off

[10] Roy C. Smith, “The Dilemma of Bailouts,” *The Independent Review*, Summer 2010. In January 2012, seeking to test the law, The Public Citizen, a public interest group, petitioned the FSOC to declare Bank of America, which it described as being in very tenuous condition for such a large bank, a “grave threat” and begin mitigation steps. The FSOC has not responded to the petition.

entirely if Tier-1 capital dropped below 7%. These bonds were priced to yield about 600 basis points over 10-year US Treasuries and we substantially oversubscribed.

European Banking Authority

In November 2010, the European Union established its own financial regulatory system, creating different units for banking, securities and insurance. The European Banking Authority sprang to life quickly, first organizing "stress tests" and then, much to the surprise of many, imposing its own minimum capital rules for the largest banks in the EU. These rules require banks to meet and maintain a 9% "core capital" requirement (relative to risk-weighted assets) by July of 2012. These are higher standards and go into effect much sooner than Basel III.

The EBA said the raised capital buffers were intended to provide reassurance to markets about the ability of European banks to withstand a range of shocks and still maintain adequate capital, and stressed the move was not done explicitly to cover losses from sovereign debt holdings.

On December 8, 2011 the EBA announced that the largest European Union banks would be required to raise €115 billion of additional core tier 1 capital by July 2012, and 27 banks would have to submit plans for raising additional capital quickly. In October 2012 the EBA announced that these 27 banks had raised an aggregate of €116bn, and that overall, European banks had raised more than €200bn, by retention of earnings, new equity issues and by reducing the size of their balance sheets.

UK Ringfencing

The UK also appointed an independent banking commission to advise the government on its exposures to too-big-to-fail situations. The combined assets of the four largest UK banks were several times the size of the GDP of the UK, according to the Commission's chairman, Sir John Vickers, and thus exposed British taxpayers to considerable expense if any of the top four should become distressed.

The "Vicker's Committee" issued its report (which the government said it would adopt) in Sept. 2011. Banks should be forced to "ringfence" their domestic retail businesses to separate them from their "casino" investment banking arms. Business inside the fence would be eligible for financial assistance from the government if needed, but those outside would not be would not be. The commission suggested that between one-sixth and a third of the £6 trillion of UK bank assets would be inside the fence, the rest not.

The Committee described the ringfence as "high" and said that both the fenced and unfenced parts of the bank should have their own boards and be legally and operationally separate from one another. Similar to the Swiss rules, ringfenced banks are to have a capital cushion of up to 20% — comprising equity of 10%

together with an extra amount of other capital such as Co-Co bonds. The largest ringfenced banks should have at least 17% of equity and bonds and a further loss-absorbing buffer of up to 3% if "their supervisor has concerns about their ability to be resolved without cost to the taxpayer." Capital could be transferred from the ringfenced bank to the investment bank only if the Tier-1 capital ratio of the ringfenced bank did not fall below the 10% minimum.

Operations outside the ringfence will not be eligible for government assistance, and will have to secure financing for their activities solely on their own credit. It is likely that such financing, if available at all, would depend on the nonringfenced business being itself very well capitalized.

In addition to ringfencing, the UK government has actively campaigned to reduce high levels of compensation paid to bankers, including a one-time bonus tax in 2010.[11]

David Cameron, the Prime Minister of the UK, has announced that his government will enact the Vicker's recommendations before 2015 and they will be implemented before the end of 2019, in synchrony with the date at which Basel III must be fully implemented. In the meantime, banks are lobbying the parliament extensively and exploring ways to create "synthetic" ways to comply with the requirements without actually doing so.

In October 2012, Liikanen Committee[12] established by the European Commission (the executive body of the EU) to address systemic risk issues issued a report that also recommended ringfencing as a way of isolating risk and requiring it to be better capitalized.

In December 2012, the French finance minister announced a plan for ringfencing "speculative assets" of banks similar to that of the Liikanen Report.

Market and Other Responses

The consequences of the financial crisis and the Great Recession that followed were felt in several different ways by global banks.

Decline in Stock Prices

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[11] The UK government supported efforts to persuade Royal Bank of Scotland Group Chairman Philip Hampton and Chief Executive Stephen Hester to waive bonuses of approximately £1 million in shares, as criticism swirled over payouts to the chief executive officers of the bank, now a taxpayer-owned institution. In January 2012, both men, appointed by the government to help revive the bank, did waive their bonuses.

[12] Named for the governor of the Central Bank of Finland.

The stock prices of the major capital market banks were shattered by the financial crisis and very slow in recovering during its aftermath. For the six-year period from December 2006 until December 2012, three US banks (Citigroup, Bank of America and Morgan Stanley) saw their stock prices drop by an average of 82%; of the other two, Goldman Sachs dropped 50% and JP Morgan Chase, 5%. The stocks of the five largest European capital market banks (Deutsche Bank, UBS, Credit Suisse, Barclays and BNP) were closely packed around an average 62% decline. See Exhibit 4.

Though markets recovered in 2009, and with them several of the capital market banks' stocks, the shares were nonetheless still trading at near historical low levels relative to their book values. Usually, a bank's book value (its net assets) is thought to be a fair representation of its liquidation value – it holds only financial assets for most of which a ready market exist – so a discount from book value suggests either that the bank's valuation of its stated assets and liabilities is suspect, or that its "going concern" business is in some sort of distress.

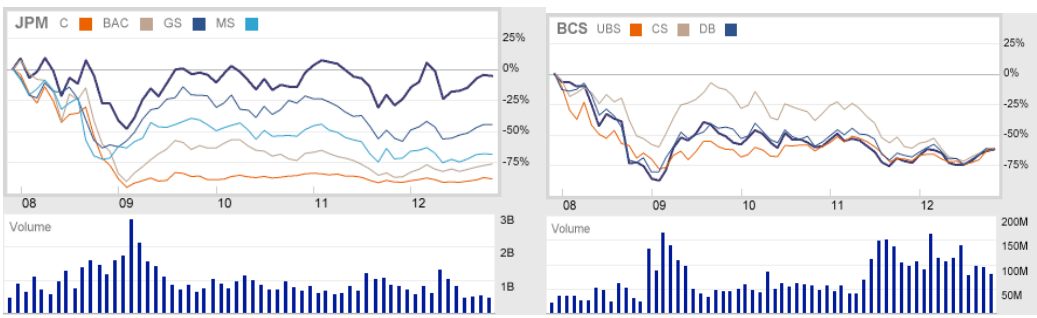

Exhibit 4 -- Declining Stock Prices of US and European Capital Market Banks

(Source: Goldman Sachs)

The market capitalization of the top ten global capital market banks (reflecting some considerable amount of new capital raised) was $800 billion in December 2009, after the banking crisis was thought to be over. Three years later, at September 30, 2012 the market value of the top ten global banks was $570 billion, despite substantial issuance of new shares, a reduction of 29%.

The average market price-to-book value ratio of the top ten capital market banks declined during this period to 0.58 from 1.08. The banks had been forced to raise Tier-1 capital to 13.8% (above required levels but still short of what would be needed in 2019), which together with protracted weak conditions in trading markets, contributed to a sharp decline in ROE by December 2012 to an average of 10.4%, or 5.9% below the average cost of capital of these banks. This differential (ROE less cost of capital) is known as "Economic Value Added" (EVA).

The average EVA for the ten banks has been negative since 2009, when it was -4.0%. Only one bank among the top 10 global capital market banks reported positive EVA in September 2012, JP Morgan Chase (1.65%). The EVA varied widely among the banks, however. The five banks with the lowest EVAs averaged -13.10% at December 2012, and the five highest, -0.94%.

Reduced Capital Market Activity

First there was a sharp reduction in demand for capital market services: global new issues of debt and equity declined 28% from the peak year of 2006 (total volume of activity was $14.7 trillion) to 2011 in which $10.6 trillion of new issues occurred. See Exhibit 6**.** Also, global merger and acquisition activity declined by 44% from its peak year of 2007 ($2.7 trillion of completed transactions) to 2011 ($1.5 trillion). See Exhibit 7.

Exhibit 10
Wholesale Banks Capitalization Data
($ billions, 12/31/2011)

Ranked by Market Capitalization	MV	MV/BV	MV/EPS	YTD ROE	Tier 1	Total Assets	Beta	Coast of Capital(a)(b)	EVA RoE-COC
JP Morgan	126	0.71	8.00	11.00	12.30	2,266	1.23	9.35	1.65
Citigroup	77	0.43	7.60	7.80	13.60	1,875	2.55	17.32	-9.52
Bank of America	56	0.28		0.10	12.69	2,296	2.20	15.21	-15.11
BNP	51	0.54	7.42	8.80	9.60	2,555	1.82	12.91	-4.11
UBS	46	0.78	10.20	10.70	18.40	1,649	1.76	12.55	-1.85
Goldman Sachs	44	0.69	9.10	5.90	13.80	949	1.40	10.38	-4.48
Deutsche Bank	34	0.76	5.60	13.10	13.80	3,078	2.22	15.33	-2.23
Barclays	33	0.33	9.30	5.80	12.90	2,409	2.54	17.26	-11.46
Credit Suisse	29	0.80	11.50	6.00	15.10	1,104	1.38	10.26	-4.26
Morgan Stanley	29	0.48	10.80	3.90	16.60	794	1.54	11.22	-7.32
Average	53	0.58	8.84	10.41	13.22	1,588	1.86	13.18	-5.87
US Average	66	0.52	7.80	5.74	13.80	1,636	1.78	12.70	-6.96

(a) Cost of capital = risk free rate + (equity risk premium x company beta)
(b) As of Dec. 31, 2011: RF = 10yr UST (1.92%) and equity risk premium = 6.04 (Damodaran)

Exhibit 5 – Wholesale Banks Capitalization Data

Deutsche Bank estimated that the global investment banking revenue pool from all transactions declined by 33% from $358 billion in 2009 to $240 billion in 2012.[13]

Part of the reduction in both sectors of capital market activity was the decline in transactions involving banks and other financial services organizations as principals, and part by the 78% decline in new issues of collateralized debt in 2011, as compared to its peak year in 2006 in which $3.3 trillion were floated.

Increase in Bank Funding Spreads

[13] Matt Spick and Matt O-Connor, "Churn in the Revenue Pool: Winning and Losing Banks," Deutsche Bank Markets Research, August 30, 2012.

The funding costs for global banks increased considerably after 2008. This is indicated by the widening of five year credit default swap (CDS) spreads from 10 to 20 basis points in 2007 to a peak of over 1,200 basis points in late 2008, after which they settled in the area of 375 basis points at the end of 2011**,** reflecting much greater disbelief in the future of federal support that would bailout bank creditors. See Exhibit 8).

Downgraded Credit Ratings

This concern was also reflected in the credit rating issued for banks by the major credit rating agencies. These agencies progressively downgraded the ratings of the largest banks after the crisis.

Global Capital Market New Issues 2001 – 2011
Excluding national government securities issues
($ billions)

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
US Domestic New Issues											
Investment Grade Debt	1,708.3	2,063.5	2,178.7	2,003.4	2,235.9	2,216.0	1,884.2	2,230.4	2,694.2	2,301.1	2,280.7
Collateralized Securities	455.8	556.6	370.4	279.4	1,274.0	1,690.1	1,812.4	1,394.8	1,359.1	1154.2	841.1
High Yield Debt	66.5	92.0	114.0	38.8	119.3	95.5	100.8	141.0	147.5	77.1	109.0
Municipal Debt	278.6	267.9	383.7	283.9	349.3	248.3	201.6	264.4	331.5	346.1	320.8
Total Debt	**2,509.2**	**2,980.0**	**3,046.8**	**2,605.5**	**3,978.3**	**4,249.9**	**3,999.0**	**4030.6**	**4,532.3**	**3,878.5**	**3,551.6**
Preferred Stock & Convertibles	25.4	48.3	39.8	98.3	98.8	72.0	44.5	52.1	93.1	66.5	137.9
Common Stock	185.6	241.0	258.6	166.0	188.1	155.4	161.3	170.1	121.1	117.8	128.6
Total Equity	**211.0**	**289.3**	**298.4**	**264.3**	**286.9**	**227.4**	**205.8**	**222.2**	**214.2**	**184.3**	**266.5**
Total U.S. Domestic	**2,720.2**	**3,269.3**	**3,345.2**	**2,869.8**	**4,263.4**	**4,477.3**	**4,204.8**	**4,252.8**	**4,746.5**	**4,062.8**	**3,818.1**
International Issues											
Euro Investment Grade Debt	2,660.4	2,711.7	3,481.2	3,246.2	3,307.7	4,308.5	2,869.6	2,589.1	2,155.8	1,435.4	1,394.3
Euro Collateralized Securities	250.4	252.8	608.4	969.3	1,107.5	1066.0	505.8	341.6	243.7	146.8	130.8
Euro High Yield Debt	311.2	346.2	140.6	48.8	148.3	179.7	101.9	102.6	66.4	32.6	34.0
Total International Debt	**3,222.0**	**3,310.7**	**4,230.2**	**4,264.3**	**4,563.5**	**5,554.2**	**3,477.3**	**3,033.3**	**2,465.9**	**1,614.8**	**1,559.1**
Total International Equity	**295.0**	**459.0**	**493.0**	**361.7**	**415.3**	**209.4**	**114.2**	**151.9**	**59.4**	**53.7**	**82.8**
Total International	**3,517.0**	**3,769.7**	**4,723.2**	**4,626.0**	**4,978.8**	**5,763.6**	**3,591.5**	**3,185.2**	**2,525.3**	**1,668.5**	**1,641.9**
Global Total	**6,237.2**	**7,039.0**	**8,068.4**	**7,495.8**	**9,244.2**	**10,240.9**	**7,796.3**	**7,438.0**	**7,271.8**	**5,731.3**	**5,460.0**
Global Syndicated Bank Loans & NIFs	4,405.0	3,251.9	2,265.5	3,574.1	5,246.1	4,531.9	4,008.8	3,076.0	2,166.3	1,860.2	2,359.0

Source: Thomson Financial Securities Data, Investment Dealers' Digest

Exhibit 6 – New Issues Raised

On June 21, 2012, Moody's announced that it had "repositioned" (lowered) its ratings of the largest capital market banks (at their holding company levels), dividing them into three tiers. Earlier, Moody's had announced that it expected to cut ratings of 15 capital market banks by from 1 to 3 notches because of "more fragile funding conditions, wider credit spreads, increased regulatory burdens and more difficult operating conditions… that together with inherent vulnerabilities…and opacity of risk, have diminished the longer term profitability and growth prospects of these firms."[14]

In its report, Moody's also provides a "standalone," or baseline credit rating that assumes no support from government or other sources.

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[14] Moody's Investor Service, "Announcement: Moody's Reviews Ratings for Banks and Securities Firms with Global Capital Market Operations," Mar. Feb. 15, 2012, and "Key Drivers of Rating Actions on Firms with Global Capital Market Operations," June 21, 2012.

The first group (senior debt ratings between Aa3 and A2 --HSBC, Royal Bank of Canada and JPO Morgan Chase) has strong capital buffers from their non-capital market activities and a record of good risk management. These banks have standalone ratings of a3 or better, on a scale ranging from “a “(highest) to “c” (lowest).

Table 1
GLOBAL M & A DEVELOPMENTS
(Volume of Transactions in US$ Billions and Percentages)

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Transactions:											
US Domestic	454.4	421.1	392.4	470.9	886.0	760.9	677.6	474.5	264.1	220.9	379.0
US Cross-Border	217.1	216.9	155.4	270.2	356.7	272.3	168.1	117.9	91.6	46.5	153.6
Intra-European	365.7	285.2	202.2	530.0	823.7	639.4	508.2	333.9	290.8	282.1	317.6
European Cross-Border	223.7	176.9	138.3	268.1	429.2	242.5	194.4	134.2	78.5	80.3	148.8
US-European Cross Border	(42.1)	(72.3)	(75.0)	(163.8)	(333.1)	(155.9)	(126.2)	(61.2)	(46.9)	(46.4)	(71.9)
All Other	321.3	448.1	289.9	386.8	567.2	322.5	312.2	194.3	150.0	184.1	164.8
Global Total	1540.1	1475.9	1103.2	1762.2	2729.7	2081.7	1734.3	1193.6	828.1	767.5	1091.9
US/Total	43.6%	43.2%	49.7%	42.1%	45.5%	49.6%	48.8%	49.6%	43.0%	34.8%	48.8%
Europe/Total	38.3%	31.3%	30.9%	45.3%	45.9%	42.4%	40.5%	39.2%	44.6%	47.2%	42.7%
US Domestic/Total	29.5%	28.5%	35.6%	26.7%	32.5%	36.6%	39.1%	39.8%	31.9%	28.8%	34.7%

Source: Thomson Financial Securities Data.

Exhibit 7 – M&A Transactions

The second group (senior debt ratings between A2-A3, Barclays, BNP-Paribas, Credit Suisse, Deutsche Bank, Goldman Sachs and UBS) has high contributions from trading. These have standalone ratings of baa1 or baa2.

The third group (senior debt Baa1-Baa2, Morgan Stanley, Citigroup, Bank of America) has experienced problems of risk management and volatility. Standalone ratings in this group are baa3.

Moody’s June 2012 report confirms what the market (Exhibit 8) has already been demonstrating – that the market for bank credit has separated into upper and lower tiers that are substantially different and reflect considerably different borrowing costs.

It also points out that there is a significant difference between its holding company (with some presumption of too-big-to-fail) and standalone ratings and the later are quite insufficient for major financial institutions conducting large scale borrowing and lending activities. Those banks in the third group have standalone ratings only one notch above junk bonds (most of their major clients have ratings higher than theirs) and could be imperiled in the next liquidity panic affecting bank paper.

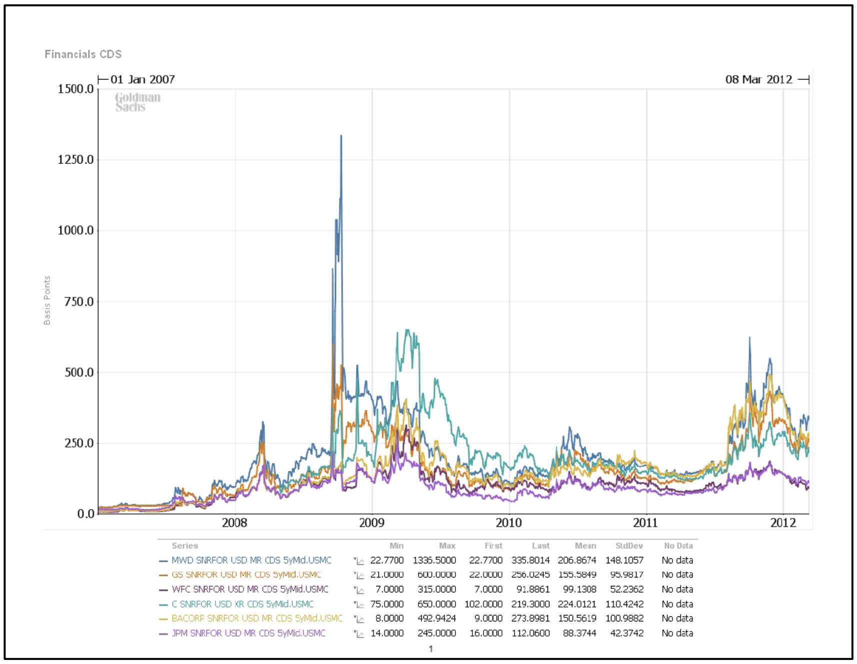

Exhibit 8 – Increased Funding Costs for Capital Market Banks

Liquidity Squeeze in Europe

As a result of growing concerns about exposures to European sovereign credits and to other banks similarly exposed, interbank credit markets began to resist European bank paper. Also, money market funds in the US that typically rolled over substantial quantities of European bank CDs (which paid a higher yield than comparable US banks) began to liquidate their positions. European banks keenly felt these market pressures. Accordingly, Mario Draghi, who replaced Jean-Claude Trichet as President of the European Central Bank on November 1, 2011, declared an unlimited access to ECB funds by European banks for up to three-years at low rates. This action, consider bold and controversial because of the open-ended nature of the commitment, clearly established the ECB as Europe's lender of last resort for banks. On December 21, 2011 an auction was held in which 523 banks borrowed €489 billion; a second auction was held on February 29, 2012 and 800 banks borrowed €530 billion. These actions substantially reduced the borrowing pressures for banks in Europe, but increased the assets on the balance sheet of the ECB from €1.3 trillion in January 2008 to €3 trillion in February 2012.

Regulatory Settlements, Public Relations and Reputation Loss

Following the peak of the crisis in the fourth quarter of 2008, a public sentiment developed in the US and Europe that the market collapse and the ensuing recession was principally the fault of the largest global banks, whose managers had been driven by excessive profit motivation including inappropriate compensation incentives that encouraged a disregard of legal and ethical standards. Elected officials in the US and the UK drove this message home repeatedly and made a number of attempts to limit bonuses at banks, particularly those that had received government assistance.

In his State of the Union address in January 2012, more than three years after the crisis, President Obama announced the formation of a special task force in the Department of Justice to work with enforcement officials of the States to pursue as diligently as possible those banks and others involved with financial fraud during the crisis. The government spared no effort to convict and jail the fraudsters that destroyed the economy. [15]

In the US, public anger at banks was widely covered by the media and even the most highly regarded banks were subject to intense investigations by government officials and journalists whose often-critical reports were widely read. Regulators were active on many fronts, and brought civil charges of securities fraud against all the banks, most prominently resulting in a $25 billion settlement with five largest US mortgage servicers (Bank of America, Citigroup, JP Morgan, Wells Fargo, and Ally Financial, formerly General Motors Acceptance Corp.).

The Federal Housing Authority, the regulator of FNMA and FMAC, and others (regulators, prosecutors, investors and insurers) also sought to recover as much as $1 trillion in losses from residential mortgage backed securities. The plaintiffs claimed that the banks underwrote securities that were backed by mortgages that did not meet standards described in the offering materials, and therefore they should be allowed to "put back" the deficient securities to the banks for repurchase at par. Put back claims were estimated by some analysts to be as large as $300,000 billion, though most believe the settlement amounts would be considerably less.[16]

In addition the SEC secured $2.6 billion in out-of-court settlements of fraud charges in connection with selling mortgage-backed securities to hedge funds and other institutional investors from Goldman Sachs, Citigroup, JP Morgan, Credit Suisse and others.

European banks were exposed to some of these and other charges related to activities in the US. UBS settled a criminal charge of aiding its clients in evading US taxes for $780 million in 2009 and the Dept. of Justice then turned its attention to Credit Suisse and other Swiss banks, which it claimed did the same thing. In addition, Barclays paid $430 million in settlement of charges of rate rigging in the LIBOR market (charges of other banks are expected), and $450

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[15] The government has not been successful in convicting any leading banking, investment banking or mortgage-banking figure of criminal activity, though several efforts have resulted in acquittals. A few individuals have settled civil charges for cash amounts covered by insurance.
[16] Jessica Silver-Greenberg, "Mortgage Crisis Presents a New Reckoning to Banks," The New York Times, Dec. 9, 2012

million to settle charges brought by the US Federal Electric Regulatory Commission in 2012. Barclays and other UK banks also were expected to have to pay $33 billion to settle claims for fraudulent sales of payment protection insurance, a retail product sold in the UK, and $2.5 billion for violating US anti-money laundering laws.

Numerous additional private lawsuits have been filed against the major banks and many of these are expected to result in cash settlements. Altogether, these various actions are expected to result in legal costs to the banking industry of approximately $100-150 billion dollars, an unprecedented sum that would involve write-downs of capital that would have to be replaced.

At no time since the 1930s had large banks been held in lower esteem by the general public, or subject to such extensive public and private litigation nor required to pay so much for the alleged misconduct. This loss of trust and confidence in major banks had several consequences: Policy makers and government bodies consulted with them less frequently and openly; regulators watched more carefully and suspected more in the way of deliberate efforts to evade rules; prosecutors were more willing to bring suits against them; existing clients were more wary and potential clients more reluctant; and employees and new recruits were more skeptical of their futures than they had been when the banks were known for their “good” reputations.

Diagnostics

There were three important elements affecting the global banking industry by the end of 2012, nearly five years after the financial crisis first began to form:

Stuck in the Downcycle

The crash in September 2008 opened the door to the Great Recession, which since then has limited US GDP growth to a five year average of a mere 1%, a growth rate far short of the minimum required to maintain employment, tax revenues, and to provide for general prosperity. This prolonged and not yet ended period of slow growth, sustained by consumer anxieties, regulatory uncertainties, fears of European economic difficulties spreading to America and concerns about the US fiscal deficit which reached 10% of GPD in 2010, has been poisonous to investment returns, with the S&P 500 virtually flat over the five-year period during a time of decreasing fixed income yields.

All this produced occasions when levels of stock market volatility were as high, or higher, than at any time in the past 20 years. See Exhibit 9.

Considering that the value of securities outstanding in global markets exceeded $200 trillion in 2007, the magnitude of financial assets subject to fear and panic was never higher. A sudden change in investor attitudes of just 5% could release financial flows of $10 trillion onto secondary markets, causing major shifts in the availability of liquidity and affecting prices accordingly. Liquidity affects have been felt not just in stocks but also in all financial assets.

Exhibit 9 - Stock Market Volatility Since 1990

Bankers have referred to this period as one of cyclical downturn, from which a recovery to “normal” (i.e., what it was before 2006) is expected to accompany a return to economic growth rates of 3%-4%. Capital markets have always been cyclical, but rarely – not since the 1930s – have they been stuck in a slump of such an extended period.

Corporate borrowing to refinance outstanding debt at historically low rates has buoyed fixed income new issues. However, the loss of confidence in the asset-backed securities sector, which accounted for 28% of all global fixed income new issues in 2006 and included “structured finance” and mortgage securitization, has lingered in the markets and brought down debt issues overall.

Mortgage finance has been deterred by lack of investor confidence in the collateral backing the assets, a slowdown in the creation of new mortgages, the overhang of foreclosed properties on the market, the absence of any private sector alternative to the US government sponsored mortgage financing entities (FNMA, FMAC), and the extremely poor condition of these firms, both of which been taken into “conservatorship” by the US government.

It is very difficult to foretell when this important but ailing sector of US financial markets may be returned to normal. It is also somewhat surprising that the investment banks have not applied their capacity for innovation to develop a new type of mortgage backed security that issuers and investors alike would want to use.

In response to these difficult market conditions, US banks have hunkered down, reducing leverage and risk weighted assets in order to increase their ability to ride out the storms reflected in market conditions. European banks have been doing the same, but even more so because their capital positions were weaker and they were more exposed to European sovereign and bank debt. As a result banks were net sellers of assets with high-risk weightings through 2012, a factor that in general weakened the market for these assets, though some banks (and nonbanks) were able to take advantage of pricing opportunities available in these sales.

In general, the prolonged period of weak markets has reduced capital market revenues by about a third since 2008, causing wide spread layoffs and other efforts to reduce costs in proportion to the revenue decline. The loss of lucrative fee income from merger advisory services, equity underwriting and derivatives trading has been considerable, but it has been accompanied by a loss of trading income, particularly in fixed income areas were, on average the top ten banks had allocated about 50% of their capital.[17]

Because of the increasing share of total revenues provided by fixed income trading, investment banks may have to consider another cyclical factor in planning for the future -- that the long cycle of lowering interest rates that has provided a bias to traders and market makers in fixed income securities for more than thirty years may have ended. This long bias affected the willingness of banks to undertake proprietary trading activities and aggressive market making to supplement their basic sources of revenue. The yield on ten-year US Treasuries has been in nearly continuous decline since 1980 (when they yielded 16%), but it has probably bottomed out at current rates (1.6% in November 2012). See Exhibit 10. This long decline in rates followed a thirty-two-year period after World War Two during which rates rose continually. Government and Federal Reserve interventions, to be sure have affected present rates, and these efforts may continue until satisfactory employment levels are achieved, but the apparent next leg of the cycle is for protracted rate rises, which is unlikely to support the extensive trading activity that has developed in major banks.[18]

10-year Treasuries at 50 year low

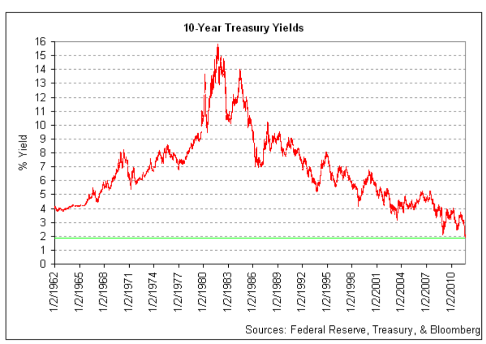

Exhibit 10 -- Long Cycle Interest Rates

17 Brad Hintz,et. al., “Global Capital Markets: Is Trading Doomed to Unprofitability Under Basel?,” Alliance Bernstein, Nov. 15, 2012
18 “The Cycle Turns,” *The Economist*, March 24, 2012

Imposition of Structural Constraints

The second element is the need for structural reform following regulatory changes that the global capital markets industry must adjust to over the next several years.

The banks are burdened by the prospects of complying with the great variety or new regulatory requirements imposed by Dodd Frank, Basel III and 2.5, accelerated EBA requirements and special rules adopted by Switzerland and the UK. These will require considerably higher capitalization ratios than before the crisis, restrictions on certain previously important trading activities (proprietary trading, derivatives – for both of which important new rules are still pending), and the need to comply with restrictions on compensation and other regulatory requirements.

These new requirements will certainly cause returns of equity (ROE) to be reduced to levels well below the 15%-20% they were before the crisis. A 2011 study by Morgan Stanley and Oliver Wyman noted that as much as a third of peak year ROE was the result of high leverage levels that will be curtailed by Basel III, and that new regulatory and related factors will decrease ROE for major global banks by 7% to 9%, before strenuous management efforts to mitigate them to a more tolerable reduction of 4%-6%.[19] Such management efforts to adjust investment banking businesses (including cost reductions and improved uses of technology) together with cyclical recoveries may improve returns to the 10% to 15% range, the study concludes, but this will depend on making major adjustments to fixed income activities and on rethinking basic business models.

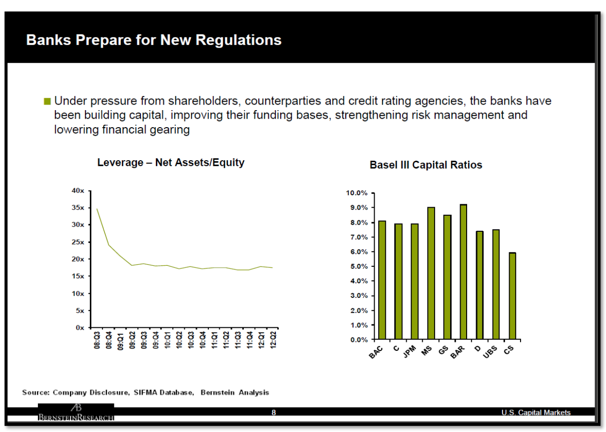

Exhibit 13: Banks Reduce Leverage

Source: Alliance Bernstein

[19] "Wholesale and Investment Banking Outlook," Morgan Stanley and Oliver Wyman, March 23, 2011

By early 2009, the major banks had drastically reduced leverage and begunb to build up their Basel Tier-1 capital. (See Exhibit 13).

Two 2012 studies by Alliance Bernstein also produced an extensive analysis showing that deleveraging, increased capital requirement and decreased margins from trading would lower returns to 5% to 6%, and for these to be mitigated to achieve "reasonable" returns [8% to 12%], "compensation of trading units must be reduced to ~40% [of revenues] and the amount of capital employed by the units must decline by ~30%."[20]

These "reasonable" returns are, however, not so reasonable relative to the banks' cost of equity capital that averaged 12.7% through the third quarter of 2012 (Exhibit 5). Cost of capital has been affected by some cyclical factors, and may improve as these dissipate, but in general, the banks are not going to be freed from low price to book ratios until their EVA improves.

Efforts to do so must include reducing trading activities across the board, exiting some trading areas that are suboptimal, and shedding low margin businesses while preserving expensive risk management and operational control systems. These efforts may have drastic effects on the internal cultures and morale of the trading units of the banks. Some of the top talent, preferring non-systemic employers with fewer regulatory restrictions, freer compensation systems and more agreeable, less bureaucratic working environments, may decide to redirect their careers into the nonbank sector. This may be a necessary process banks must go through as they diminish their aggressive "masters of the universe"[21] roles while returning to the relatively prosaic status of the professional services firms of the past.

Moreover, global banks prior to the crisis often promised investors growth rates in the area of 15% or more based on both organic growth from a wide and increasing range of different revenues platforms, and from mergers and acquisitions. Much of the growth of most large global banks over the past 15 years was the consequence of "strategic acquisitions." However, Dodd-Frank places significant restrictions on future mergers or acquisitions by systemically important banks, thus limiting this avenue of future growth for these banks.

Banks also must face the fact that their large scale, competitively aggressive, multi-platform business models have lost the confidence of the institutional investors that have owned their shares for years. The Morgan Stanley – Oliver Wyman study concludes that investors are skeptical about the ability of current management to work out their problems and re-engineer business models.

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[20] Hintz, et. al., *Op Cit.,* and Brad Hintz, et. al., "The Global Capital Markets Tontine," Alliance Bernstein, November 21, 2012

[21] A term coined by author Tom Wolfe in his 1987 best seller- *Bonfire of the Vanities* to describe overpaid, over-aggressive bond traders.

Indeed, most global banks are now regarded as too big and complex to manage effectively, -- their recent history of write-offs, downgrades, legal and regulatory controversies, and management turnover have presented a picture of an industry out of control. Because of this and their enormous size – the top ten banks average over $1.7 trillion in assets – the banks continue to be considered potentially dangerous by their regulators, requiring strict controls to protect against systemic failure.

Major banks need to consider how they want their investors to think of them in the future. They can no longer sell themselves as high growth, high return financial fortresses that can dominate markets with impunity. That business model is no longer credible. The banks need to be able to demonstrate that they are in control of their businesses, understand and can manage the risks they take and can do all this with consistent returns significantly in excess of their costs of capital.

For most banks this will mean having to face the possibility that their legacy business models, which many of their board members and executives helped to shape, are no longer what they were, and need a fresh, zero-based review. There is a huge difference between the economic and cultural underpinnings of consumer/business banking and global investment banking, and little evidence that the two benefit much from being joined together beyond a minimal degree necessary to accommodate executions for clients. There is considerable history of large banks stumbling after too much exposure to investment banking.[22]

Several banks have begun the process of reexamining their basic business strategies. Often this begins with a change in top management. Between 2009 and 2012, seven of the top ten global banks have made CEO changes, three of which were made "effective immediately." At Citigroup, Morgan Stanley, Barclays and UBS, CEOs with trading backgrounds were replaced by executives with little trading experience who announced plans to scale back trading as a percentage of the total firm's business. Non-traders remain in charge at Bank of America and BNP-Paribas. In July 2012, Barclays replaced its investment banker CEO with a retail banker who promised a strategic review and an announcement of changes in early 2013 (Barclays' stock price rose 62% between July and December 2012). In October, UBS announced significant changes that will shrink trading activities considerably, and Citigroup announced a sudden replacement of its CEO with a strategic review to follow.

Loss of Reputation

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[22] John Reed discovered this when he was CEO of Citicorp and shed its investment banking business in the 1990s before its merger into Travelers; American Express discovered it too after years of seeing its stock price dragged down by its ownership of Lehman Brothers. Barclays and National Westminster Bank also learned how difficult investment banking could be in London (Barclays withdrew from most of it until it decided to reenter with its acquisition of the Lehman Brothers franchise in 2008, NatWest was so weakened by its experience that it was taken over by a smaller Royal Bank of Scotland, which subsequently failed and had to be taken over by the UK government).

For years bankers believed that the value of a good reputation was visible in preserving access to and influence with regulators and other policy makers in government, including the Treasury and the Federal Reserve, which solicited advice on measures they might take. This influence has been greatly diminished.

A good reputation – for competence, probity and trustworthiness – clearly helps in attracting new client relationships with corporations, foreign governments, financial institutions and wealthy families. When clients and potential clients become wary of relationships with banks with less than good reputations, they may go elsewhere – to smaller banks or boutiques – or they are less trusting in their transactions with the bank. These are not positive developments for service-oriented businesses, though they may matter less in dealing with trading counterparties.

And a good reputation – especially a very good one -- can add value to the firm's "franchise," or overall business that is valued daily by the stock market. Major banks today have historically very low stock price to book value ratios, with the top ten banks averaging only 0.63 in September 2012. The low prices of course are influenced by the cyclical and structural factors affecting the industry, but their sagging reputations also contribute.

In 1999, Wall Street enjoyed a reputation for competence, professionalism and the ability to make money for themselves ands their clients in the ever-expanding world of capital markets. Sanford Weill was the industry's best-known individual banker for having engineered the year before the most dramatic and influential merger of the decade – the acquisition of Citicorp by Travelers Group to form Citigroup. The industry's most prestigious group of bankers were no doubt the partners of Goldman Sachs who took their firm public (the last of the old partnerships to do so) in May of 1999 at a record-setting 3.5 times book value.

A year later, however, the picture had began to change as the bubble in technology stocks burst, plunging some of the darlings created by Wall Street (Enron and WorldCom) and many of its recent hot IPOs into the doldrums. The "tech wreck" proved the be the worst finance-originated setback since 1929, causing three years of consecutive record breaking bankruptcies and three years of negative returns in the stock market. Though most of the wrong doing was attributed to failures of accounting and corporate governance (resulting in the passage of the Sarbanes-Oxley Act of 2002), the public was encouraged to believe that Wall Street's greed, excessive compensation scales and ethically indifferent actions were the ultimate cause of much of the bubble and its painful consequences.

Several individual Wall Street firms were subject to regulatory penalties and civil settlements that by 2003 consumed most of their investment banking profits earned since 1999. But also in 2003, the NY State Attorney General Eliot Spitzer initiated a lawsuit against the ten largest underwriters of initial public offerings charging fraudulent practices and seeking penalties and reforms. The SEC ultimately joined the suit, which was settled out-of-court by the firms for $1.4

billion. This was a huge, unprecedented amount that "sent a message" to Wall Street, and warned its clients of the predatory behavior that might be expected from it.

The NY Attorney General also brought complaints about the actions of the chief executives of Citigroup (Weill), AIG (Maurice Greenberg) and the New York Stock Exchange (Richard Grasso) that resulted in their forced removal from office by their boards of directors. [23]

While these events were going on, the mortgage finance bubble was being inflated. When it burst the consequences in terms of loss of value in real estate, other investments, and in reduced national economic growth and employment were well beyond any previous crisis other than the Great Depression. Regulators, prosecutors, civil litigants and the media were quick to blame Wall Street for causing the crisis. Exceptionally high bonuses being paid for the production of profits, many believed, had turned even the most staid and traditional banks into predators.

The banks that failed and had to be rescued by the US government (Bear Stearns, Citigroup, and Bank of America) took the most blame, though Goldman Sachs and Morgan Stanley, which converted into Bank Holding Companies and took TARP money (even though they had each arranged private equity infusions), were also scorned for having to be bailed out.

Since 2009, the cost to the five largest US capital markets banks of settling regulatory complaints and other litigation for abuses in the sale and processing of mortgage securities, and other forms of securities fraud is estimated to reach approximately $50 billion.[24]

Late in 2012, US and European authorities settled charges against UBS and Barclays Bank for market rigging in the LIBOR market for $2.4 billion, with several other banks still under investigation. At the same time, the US Department of Justice settled charges of money laundering and abuses of the Foreign Corrupt Practices Act with HSBC for $1.9 billion, and with other non-US banks for $3.4 billion. Altogether, such settlements with non-US banks for these and other offenses including aiding in tax evasion are estimated to reach $10 to $15 billion.

As large as some of these settlements may be, stock prices of the banks involved rarely move very much on their announcements. Partly this is because the market has processed the information earlier when the investigations became known, and partly because the charges are regarded as one-off events resulting

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[23] Weill and Greenberg were hands-on executives who watched trading activities closely. They were replaced by executives unfamiliar with trading and not able to prevent these two firms (Citigroup and AIG) from experiencing the enormous losses they suffered in 2007 and 2008.

[24] Bank of America has absorbed by far the greatest amount of these charges, from actions related to Countrywide, the acquisition of Merrill Lynch and transactions with FNMA and FMAC. These and other charges as yet unsettled totaled approximately $37 billion in November 2012.

from something that occurred in the past. According to one close observer, Prof. John Coffee at Columbia Law School, the apparent lack of market response to penalties "may encourage US regulators to be more aggressive," which banks should anticipate in the future.[25] This suggests that the worse a bank's reputation gets, the more likely it is to attract further investigations and sanctions.

Every one of the top ten global investment banks has been involved in multiple regulatory or other civil complaints, with the details of the charges being widely covered in the media. None of these cases has been, or is likely to go to court where the risk of a conviction that could open the door to an avalanche of class action suits would be too great. So they settle, with no proof of the offenses being offered or admission of guilt and move on.

This process is not very satisfactory, because the public rarely gets to know exactly what happened, what laws were broken (if any), or what the defense against the charges was. Further, prosecutors and regulators present extensive charges against the banks, but in almost all cases do not charge any individual with the offenses allegedly committed.

For the major banks, the settlements, which are charged against capital that must be replaced, have become a cost of doing business, a cost that has been steadily rising.

The continuous parading of these alleged offenses has created a public perception of banks as serial offenders that are either out of control of their senior executives, who presumably would not tolerate such conduct if they knew of it, or that the senior executives are a group of malevolent individuals who care little for the law or ethical conduct.

Such an image also leads to the perception that if the banks are out of control, they may fail again, and again have to be bailed out with taxpayer money. Thus, they should not be trusted for either being competent or lawful, and should be broken up or strictly controlled. The fact that banks think this is a very inaccurate and unfair description of their situation has carried little weight in public arenas.

Various factors shape a bank's reputation, and a good reputation is essential for a bank's future prospects. A bank's reputation, however, is the result of good management – of standard setting, investment in efficient control systems, and strict enforcement of the rules at all levels. As Professor Coffee notes "bank CEOs, like Caesars wife, have to be above suspicion."

Alternative Pathways

Banks can adjust their structural situations in three different ways.

[25] John Coffee, "Reputation is Crucial for Bank Investors," *The Financial Times*, Dec. 21, 2012

Shifting Regulatory Jurisdiction

They could seek a more favorable regulatory regime, by relocating to a different jurisdiction. HSBC relocated to London after the reversion of Hong Kong to the Peoples Republic of China in 1997; conceivably Barclays Bank may want to avoid the burden of UK ringfencing of its substantial nonUK businesses (more than half of its profits being outside the fence) by relocating to New York, or conceivably Goldman Sachs might want to avoid the many constraints of Dodd Frank (and US taxes) by merging itself into a Bermuda corporation.

There are substantial costs to jurisdiction shopping, including the reluctance of markets to approve of large risk-taking entities moving themselves beyond the reach of safety and soundness regulation. None of the top ten capital market banks have suggested they might relocate to another location, and Barclays, in particular, has denied that it would.[26]

Retreat from Wholesale Banking

Banks, especially those with a relatively short history in capital markets, could move to divest themselves of all or most of their investment banking units. They would be guided by the experience of the seven largest global commercial banks by market capitalization, which though also suffering from a cyclical downturn, averaged in 2011 a positive economic value added of 1.00% and a market to book ratio of 1.15.[27] See Exhibit 13. These banks had relatively modest commitments to investment banking. The two largest, HSBC and Wells Fargo, had market capitalizations at December 30, 2012 of $194 billion and $179 billion, respectively, as compared to $164 billion for JP Morgan Chase, which had the largest market capitalization among the capital market banks.

Of the top ten global banks Bank of America, Barclays, and UBS, for economic and regulatory reasons, may decide to leave capital market banking altogether by selling or spinning off their investment banking units. If so, they might be reassured by the successful sale and spin-off of Lehman Brothers by American Express in 1994. [28]

However, to exit these business entirely would eliminate a substantial portion of the bank's revenues, so they may prefer instead to cut trading activities back sharply while retaining the fee-based service businesses. In October 2012, the new management of UBS announced a major acceleration of its plan to reduce the size of its funded balance sheet by 300 billion Swiss Francs by the end of

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[26] Julia Werdigier, "Could Barclays Move to New York?" *New York Times,* March 30, 2011

[27] HSBC, Wells Fargo, Royal Bank of Canada, Toronto Dominion, Santander, Standard Chartered, and BBVA. The two Spanish banks, deeply involved in the current Spanish economic difficulty, reported negative EVA, the rest reported EVA ranging from 1.1% to 8.5%. The Spanish banks were strong EVA performers before the crisis in their home country.

[28] American Express sold the retail brokerage business to Sandford Weill's Smith Barney and spun off the investment bank to AMEX shareholders.

2015 and to exit much of its trading activities. Barclays, whose new management has promised a strategic review by February 2013, appears to be headed in the same direction.

Retail Banks Capitalization Data
($ billions, 12/31/2011)

Ranked by Market Capitalization	MV	MV/BV	MV/EPS	YTD ROE	Tier 1	Total Assets	Beta	Coast of Capital(a)(b)	EVA RoE-COC
Wells Fargo	145	1.12	10.50	11.97	11.33	1,314	1.32	9.89	2.08
HSBC	136	0.82	6.50	10.90	14.10	2,767	1.18	9.05	1.85
Royal Bank Canada	77	1.74	11.50	18.00	13.30	752	1.25	9.47	8.53
Toronto Dominion	71	1.58	11.40	13.20	13.00	686	1.30	9.77	3.43
Santander	67	0.68	9.75	7.14	11.01	1,625	1.72	12.31	-5.17
Std Chartered	54	1.32	11.90	12.20	13.70	599	1.52	11.10	1.10
BBVA	43	0.80	10.90	8.00	10.30	777	1.80	12.79	-4.79
Average	85	1.15	10.35	11.63	12.39	1,217	1.44	10.63	1.00

(a) Cost of capital = risk free rate + (equity risk premium x company beta)
(b) As of Dec. 31, 2011: RF = 10yr UST (1.92%) and equity risk premium = 6.04 (Damodaran)

Exhibit 13 – Global Retail Bank Capitalization

Reengineer the Business Model

For those banks determined to remain as market leaders in the global wholesale banking business, it will be necessary to rethink the role of trading in their business models, i.e., to determine how much their capital and other resources are to be committed to trading activities beyond what is necessary to conduct top of the line underwriting and advisory businesses. Dodd-Frank has disallowed much of the proprietary trading that “flow traders” routinely performed. Banks are still likely to use their balance sheets or for “mandate seeking” by offering to put up capital at competitive prices in exchange for the assignment to manage a transaction. Such actions can involve banks making bridge or other loans for extended periods, to be distributed or refinanced when market conditions permit. However, the capital costs of supporting large inventories of loans and securities purchased for such purposes will be economically challenging at best for systemically important firms under the new rules.

Banks have different business models, but all will have to rely more on their distribution capabilities rather than their balancer sheets in making markets for clients. They will have to take cost out of their trading businesses with technology (including greater use of electronic exchanges) and by eliminating the low margin sectors. They will also have to reduce compensation paid to traders – market makers need not be paid as generously as proprietary traders, most of which will be eliminated – but new approaches to compensation will be necessary to improve ROE as much as is needed.

JP Morgan may be the model that other large universal banks will recognize as the standard for the future: capital market activity accounts for about 35% of profits with proprietary trading never amounting to a significant portion. Risk management has high priority and, as the "London Whale" episode of significant trading losses in 2012 demonstrated, the bank is prepared to take very firm measures, including firing very senior people, when mistakes are made, even mistakes that are relatively modest in the context of the banks overall business.

The former investment banks (Goldman Sachs and Morgan Stanley) and Credit Suisse may have to experiment with different structures for their businesses to be able to regain the esteem of their investor they once enjoyed.

Goldman Sachs is the most committed of all the top ten banks to trading and the management of "alternative assets" (it had a substantial proprietary trading and investing business and owns hedge funds, private equity and real estate funds that would be disallowed by the Volcker Rule, though it will have several years to disengage from them). It may decide that its shareholders would be better off if it distributed its extensive alternative asset management business (which is comparable to Blackstone's, an industry leader) to them if the business could be operated as a nonsystemic nonbank without the regulatory burdens that Goldman Sachs itself cannot escape. While it is committed to adjusting its trading business to comply with Volcker, it is also committed to preserving trading as a major element of its business.

In 2010 James Gorman, a retail brokerage executive who joined the firm from Merrill Lynch in 2006, succeeded John Mack, a long-term Morgan Stanley fixed-income trading executive, as CEO. The previous year, Morgan Stanley made a major strategic change in forming a joint venture with Salomon Smith Barney (of which initially it would own 51% and CitiHoldings 49%), committing itself to acquiring, in stages, the portion still held by Citigroup over the next few years. Doing so would make Morgan Stanley the largest retail brokerage firm in the world. In September 2012, Morgan Stanley announced it would acquire a 14% stake in the joint venture, and the rest of it over the next three years. [29]

The retail brokerage business is not as capital intensive as investment banking, so absorbing the joint venture could be beneficial to Morgan Stanley, but continuing to be "systemically important" under regulatory requirements could offset the benefits. Possibly Morgan Stanley could give up its status as a Bank Holding Company, though this alone might not enable it to escape the capital requirements if Morgan Stanley were to be designated a systemically important nonbank. If the burden of being systemic is too great, Morgan Stanley may

[29] After long discussion Morgan Stanley and Citigroup agree on a valuation of the joint venture of $13.5 billion and Citigroup announced it would take $2.9 billion after-tax write-down from the transaction.

decide to separate the brokerage and investment banking businesses, though this would be a complex and expensive process.

Credit Suisse, another of the smaller top ten banks, may be in a similar situation and decide that it is too difficult for its investment bank to meet its goals under the strict requirement of the Swiss Finish rules. If so, it may decide that it is better off sticking with its profitable asset management business and selling or spinning off its investment bank.

Such breakup actions may release considerable amounts of shareholder value, particularly when the holding companies are trading well below book value. In December 2010, Michael Price, a former shareholder activist investor, said on Bloomberg Television that he believe Goldman Sachs would be worth considerably more than it then was if it were broken up into three business: an investment bank, an asset management company and a broker-dealer.[30] Nothing came of this idea, but the large banks should not dismiss the possibility of shareholder activists trying to generate invest support for breakups of one kind or another. [31]

Nor should management of large banks dismiss the possibility of their boards of directors insisting on breakups as away to escaping the stagnation that their low performing stock prices represent. The boards of Citigroup and Barclays Bank may have had this in mind when they made their decisions to replace top management.

Adapting to Survive

The investment banking business goes back to the 19th century when some of the present leading firms were established, but the industry existed long before then, in one form or another. Observers have noted that over time the industry persists – capital has to be raised and invested – but individual firms come and go. In the 1930s, US banks were required by law to divest their securities units and the industry was changed radically as adaptations were made. In the 1960s and 1970s, technology developments and important regulatory changes occurred that forced firms to adapt again. The pattern of continuous adaptation has lasted until the present; today's firms will have to adapt to regulatory changes as profound as those of the 1930s amidst global markets of enormous size and volatility.

[30] On December 2, 2010 the price of Goldman Sachs stock closed at $162 per share after the Price broadcast in which he said the stock could be worth $250 in broken up; on December 28, 2012 the stock price was $126.

[31] Shareholder activists have had considerable success in causing large, underperforming banks to be sold, including Chase Manhattan acquired by the smaller Chemical Bank in 1995, Union Bank of Switzerland, acquired by the smaller Swiss Bank Corp. in 1998, National Westminster Bank acquired by the smaller Royal Bank of Scotland in 2000, and ABN Amro, acquired through a hostile tender offer by Royal Bank of Scotland and other in 2009.

Adaptations are uncertain events. Some first movers set the stage for others to follow, even though the success of the moves may be uncertain or even doubtful. Some firms will hesitate to change, either out of inertia or indecision, and they may suffer from their caution, or not as only the future can reveal. But all have to think about how they might best adapt their particular businesses to the new conditions.

It may be possible to sustain negative EVA during a temporary period – even an extended period – of transition, but negative numbers point to nonviabliity in the long run and thus they must be addressed. A more optimistic outlook for improving economic conditions has lifted all bank stock prices since the end of 2011 by almost 20%, but the structural part of the weight on bank stocks has to be respected too.

All of the major banks are considering how they might adjust – some are waiting for improved markets to sell or spin off parts of their businesses, other are waiting for a more definitive understanding of the new rules before acting. There are indeed quite a few important rules we are still waiting for.

One thing that seems sure, however, is that the global capital markets industry that now encompasses more than $220 trillion of market value outstanding will survive, but the firms that comprise it will change. In 1965, there were about 30 investment banks in the US that made up underwriting syndicates and another 10 “merchant banks” in the UK that did the same. There were also about a dozen large “money center” banks in the US that provided wholesale financing for corporations, and another 10-15 such banks in Europe. Today all of those banks and investment banks have either failed or disappeared into mergers (though well known names have been preserved) – with one exception, Goldman Sachs, which, though it sold shares to the public in 1999, has never sold control of the firm to another.

December 30, 2012