Global Banking after the Cataclysm

By Roy C. Smith

After many years beginning in the 1970s of continuous, incremental deregulation, global market integration and major advances in telecommunications technology, world financial markets became vast and efficient. The markets were efficient in the sense that they lowered the cost of capital, and improved returns on investment to market users to such an extent that funds around the world were being transferred from the balance sheets of local institutions into tradable instruments in capital markets.

Global Capital Markets

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). The market value in 2007 was

Exhibit 1 – Value of Global Financial Stock

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1 Kenneth Langone Professor of Finance, NYU Stern School of Business; working paper dated March 30, 2012, not to be cited without permission.
about ten times greater than the GDP of the United States and the European Union combined. 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 are the intermediaries in capital markets, acting as underwriters, brokers and dealers (traders), and advisors in merger and other transactions. They used their own capital as market makers and for “proprietary” trading opportunities. This was a business that sustained high rates of returns on capital for the bankers, especially in the rising markets for debt and equity securities of the 1980s and 1990s. The investment banks of that period, however, were relatively small and did not have the capacity to support the sort of volumes that developed in the markets later on.

**Increased Competition**

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 After years of incremental lifting of the barriers, the old law was repealed -- a year after the otherwise illegal Traveler-Citicorp merger was announced in 1998. In Europe, “universal banks” were never restricted in their investment banking activities, though most were not as aggressive as their American counterparts were to become after 1999.

Not only were US banks allowed to cross over into the riskier and, for most, unfamiliar territory of capital markets, they were also permitted to expand rapidly across state lines, with the repeal in 1994 of the McFadden Act of 1927.²

By 2007, the dozen or so “money center” banks of the 1990s had been consolidated into just three very large Bank Holding Companies (Citigroup, JPMorgan Chase, and Bank of America) that engaged in a wide variety of financial services. These banking institutions, both the result of numerous merger and acquisition transactions, had become “too-big-to-fail” – i.e., 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

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² An earlier banking crisis occurred in the US 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 in 1984 after guaranteeing all depositors, lenders and bond holders. This action preceded the failure of other large banks, many 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.
(and others thought to share the designation) were able to fund themselves in the markets.

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 – which they did mainly by leveraging their balance sheets, but also through innovation in new products (such as more sophisticated forms of mortgage-backed securities), and by a willingness to accept risk in transactions they undertook.

**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 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 accounted for 94% of these transactions (the top 5 had 57%). The banks 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). (See Exhibit 2).

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### Exhibit 2 – Global Capital Market Leaders

<table>
<thead>
<tr>
<th>Firm</th>
<th>Rank 2011</th>
<th>Rank 2010</th>
<th>Global Debt</th>
<th>Global Equity</th>
<th>M&amp;A Advisory</th>
<th>Syndicated Bank Loans</th>
<th>Total</th>
<th>Market Share</th>
<th>Cum Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP Morgan</td>
<td>1</td>
<td>1</td>
<td>8376.8</td>
<td>401.49</td>
<td>5286.7</td>
<td>420.27</td>
<td>13857.21</td>
<td>10.9%</td>
<td></td>
</tr>
<tr>
<td>Bank of America</td>
<td>2</td>
<td>2</td>
<td>280.25</td>
<td>526.06</td>
<td>385.748</td>
<td>405.94</td>
<td>1293.752</td>
<td>9.2%</td>
<td></td>
</tr>
<tr>
<td>Merrill Lynch</td>
<td>3</td>
<td>3</td>
<td>150.028</td>
<td>482.38</td>
<td>651.865</td>
<td>565.61</td>
<td>1461.96</td>
<td>7.9%</td>
<td></td>
</tr>
<tr>
<td>Goldman Sachs &amp; Co</td>
<td>4</td>
<td>6</td>
<td>217.87</td>
<td>329.24</td>
<td>374.51</td>
<td>270.519</td>
<td>924.13</td>
<td>7.6%</td>
<td></td>
</tr>
<tr>
<td>Citigroup</td>
<td>5</td>
<td>4</td>
<td>170.95</td>
<td>708.09</td>
<td>592.59</td>
<td>635.05</td>
<td>846.746</td>
<td>6.0%</td>
<td>4%</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>6</td>
<td>5</td>
<td>336.00</td>
<td>224.11</td>
<td>334.478</td>
<td>172.32</td>
<td>813.748</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>Barclays Capital</td>
<td>7</td>
<td>7</td>
<td>304.756</td>
<td>402.87</td>
<td>344.252</td>
<td>96.729</td>
<td>777.832</td>
<td>6.4%</td>
<td></td>
</tr>
<tr>
<td>Deutsche Bank AG</td>
<td>8</td>
<td>8</td>
<td>168.622</td>
<td>409.92</td>
<td>451.817</td>
<td>887.36</td>
<td>756.206</td>
<td>5.2%</td>
<td></td>
</tr>
<tr>
<td>Credit Suisse</td>
<td>9</td>
<td>9</td>
<td>165.641</td>
<td>288.98</td>
<td>243.638</td>
<td>301.78</td>
<td>463.638</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td>UBS</td>
<td>10</td>
<td>10</td>
<td>159.051</td>
<td>490.37</td>
<td>118.437</td>
<td>121.81</td>
<td>439.175</td>
<td>3.6%</td>
<td>6%</td>
</tr>
<tr>
<td>BNP Paribas SA</td>
<td>11</td>
<td>12</td>
<td>182.149</td>
<td>381.18</td>
<td>92.450</td>
<td>85.215</td>
<td>266.261</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>HSBC Holdings PLC</td>
<td>12</td>
<td>11</td>
<td>147.524</td>
<td>380.92</td>
<td>66.05</td>
<td>140.21</td>
<td>243.428</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>WBS</td>
<td>13</td>
<td>20</td>
<td>63.65</td>
<td>10.166</td>
<td>291.81</td>
<td>10.744</td>
<td>305.59</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Lazard</td>
<td>14</td>
<td>13</td>
<td>266.008</td>
<td>266.008</td>
<td>266.008</td>
<td>266.008</td>
<td>266.008</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>RBC Capital Markets</td>
<td>15</td>
<td>15</td>
<td>766.06</td>
<td>865.66</td>
<td>908.06</td>
<td>674.48</td>
<td>2435.01</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Mizuho Financial Group</td>
<td>16</td>
<td>--</td>
<td>146.838</td>
<td>574.19</td>
<td>153.905</td>
<td>225.005</td>
<td>383.805</td>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>Societe Generale</td>
<td>17</td>
<td>14</td>
<td>776.631</td>
<td>594</td>
<td>836.64</td>
<td>504.44</td>
<td>218.438</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Nomura</td>
<td>18</td>
<td>17</td>
<td>456.51</td>
<td>574.09</td>
<td>117.697</td>
<td>168.73</td>
<td>168.73</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Mitsubishi UFJ Financial Group</td>
<td>19</td>
<td>--</td>
<td>142.273</td>
<td>142.273</td>
<td>142.273</td>
<td>142.273</td>
<td>142.273</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>Rothschild</td>
<td>20</td>
<td>16</td>
<td>137.59</td>
<td>153.739</td>
<td>153.739</td>
<td>153.739</td>
<td>153.739</td>
<td>1.1%</td>
<td>89%</td>
</tr>
<tr>
<td>Industry Total</td>
<td></td>
<td></td>
<td>3933.396</td>
<td>605.440</td>
<td>3256.605</td>
<td>4404.959</td>
<td>12201.460</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The Build Up

The market avalanche that commenced in September 2008, was preceded by a more than year-long decline in market prices of securities backed by real estate. But even before then, the seeds of this crisis 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 chief response to the 2000-2002 crisis was the Federal Reserve’s -- to lower interest rates to virtually nothing to stimulate recovery. This ultimately occurred, but it also led to an abnormal rise in certain asset prices, particularly of securities backed by mortgages on real estate, originally developed in the 1980s.

Institutional investors, especially pension funds, had suffered low returns (often losses) from equity markets since 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 hedge funds and to investments in relatively high-yielding AAA-rated asset-backed securities. Exhibit 3 illustrates the rapid growth in the new supply of such securities, from $100 billion per quarter in 2002 to $280 billion in 2007, of which subprime issues increased from about $30 billion per quarter to over $130 billion.

Exhibit 3 – Growth of Asset Backed Securities
Many investors then saw themselves in similar positions to US pension funds. Over the next few years, a modest shift in allocation of investment assets resulted in a rush of demand for a few favored investment strategies. Equally, when the favoritism is lost, a rapid rush for the exits can develop.

**Cataclysm**

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 short-sighted 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, Merrill Lynch was driven into an acquisition by Bank of America, and the two surviving investment banks (Goldman Sachs and Morgan Stanley) had been converted into bank holding companies. Further, one of the largest regional banks (Wachovia) had been rescued by acquisition by Wells Fargo 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 four years.
Bailouts and Government Support

In the US, government assistance to banks began 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 funds were intended to be used to purchase 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 global 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 $245 billion in the banking industry; by Sept. 30, 2011, it had collected $258 billion in repayments, dividends and other income, while still holding only $17 billion of securities of 390 banking institutions. The capital market banks had all fully repaid their investments from TARP by the end of 2011.³

The banks, which wrote off enormous amounts of capital during the crisis, had to replace it. 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. 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, but 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. See Exhibit 4.

The stock prices of these banks and other major financial institutions affected by the crisis suffered considerably. Based on early 2008 market values, FNMA, FMAC, AIG, and Lehman Brothers lost virtually all of their market value over the four years to January 2012; Citigroup and Bank of America experienced losses of 80% or more; Morgan Stanley lost 60%; Goldman Sachs, 30%; and JP Morgan Chase, 10%. All of these institutions, except Goldman Sachs and JP Morgan, experienced crisis-related CEO and other management changes.

³ US Treasury Dept., Citizens Report on Trouble Assets Relief Program, Fiscal Year 2011
The five Europeans among the top ten global banks (UBS, Deutsche bank, Credit Swiss, Barclays and BNP-Paribas) suffered similar results: their average stock price decline over the four years was 50%; UBS, the only bank among this group to receive bailout assistance from its government, also experienced two crisis-related CEO changes.

<table>
<thead>
<tr>
<th>Lost</th>
<th>Raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>America</td>
<td>1,192</td>
</tr>
<tr>
<td>Europe</td>
<td>584</td>
</tr>
<tr>
<td>Asia</td>
<td>44</td>
</tr>
<tr>
<td>World Wide</td>
<td>1,820</td>
</tr>
</tbody>
</table>

Exhibit 4 – Bank Capital Lost and Raised

**Regulatory Responses**

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 to assist them in overcoming a surge of selling activity in their common stock, which threatened to disrupt their ability to roll over their maturing debt obligations. Both investment banks took advantage of the offer, which was speedily implemented.

A much greater amount of support was given to banks by the Federal Reserve in its market intervention activities, than was provided by TARP. A Bloomberg report, based on a Freedom of Information Act request, reveals that the Fed committed an 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. 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 2010 of $76 billion. The Fed’s actions, little noticed at the time, constituted the largest financial intervention effort by any government ever to take place.

**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. These standards had been revised prior to the crisis, but had not been adequate to prevent the systemic collapse that occurred. Hurriedly the committee met (in 2010 and 2011) to revise the standards again (Basel III) to toughen them up. 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. 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 equity.

Some banks have calculated that a 6% Basel III ratio is the rough equivalent of a Basel I tier 1 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 9%-10% 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 and the largest European 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 to allow them to be wound up without taxpayer help (“living wills”

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due to be in effect by the end of 2012) if they should get into trouble. Of the banks listed, 17 are from Europe, 8 are U.S. banks\(^5\), 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. Eighteen months after the bill was passed, only about 90 of the new rules 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 bodies. (See Exhibit 5). 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.\(^6\)

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\(^6\) “Too Big Not to Fail,” *The Economist*, Feb. 18, 2012
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 February 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, though how much this premium would be had also not been released. Further, systemically important institutions will be subject to the Volcker Rule (a part of the law which prohibits “proprietary trading” and related activities); the actual rules governing the Volcker Rule had also not yet been released. The Volcker Rule is scheduled by Dodd-Frank to become effective in July, 2012, though there is broad expectation that it may be deferred. 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.

Similarly rules requiring the trading of derivative contracts on exchanges or clearing house platforms were still under development in February 2012, though these too are scheduled to become effective later in the year. These rules most likely will subject banks to margin requirements they did not have to meet while dealing entirely over-the-counter.

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; how many banks would they have to be broken up into?), or to reimpose 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 permitted. This process is cumbersome at best – it requires an official designation of a bank as being a “grave threat” to financial stability (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?

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7 Roy C. Smith, “The Dilemma of Bailouts,” *The Independent Review*, Summer 2001. 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.
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 new international Basel III standards. The two banks must hold at least 10% of risk-weighted assets in form of common equity and another 9%, which could be contingent convertible (“CoCo”) bonds, taking the current total capital requirements to 19%.

CoCo bonds are fixed income obligations that are required to be converted 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, Lloyds Bank, Rabobank and others, usually with conversion triggers of tier 1 capital dropping below 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%.

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 that 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. Of this amount €26 billion would have to be raised by Spanish banks, €15 billion by Italian banks, and €13 billion by German banks.

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. 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 will be eligible for financial assistance from the government if needed, but those outside will not be. The commission suggested that between one-sixth and a third of the £6 trillion of UK bank assets should be inside the fence, the rest not.

The Commission described the ringfence as "high" and said that the ringfenced part of the bank should have its own board and be legally and operationally separate from the parent bank, and or any global or wholesale units. 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 moved 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 very well capitalized itself.

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, and has 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 officers executive of the taxpayer-owned institution. In January 2012, both men did waive their bonuses.

Therefore, the Basel III standards apply to all banks within the 27 countries signing on to the Basel Accord; Basel 2.5 applies to the G20's 29 globally systemic banks; and the largest banks in Switzerland and the UK will be subject to further additional capital charges. The US FSOC has not announced its capital surcharge for systemically important banks, but as it is a signatory to both the Basel Accord and the G20 agreement it must be assumed that these arrangements apply to the US banks named in the G20 report.

**Financial Transaction Taxes**

In January 2012, French president Nicholas Sarkozy said a new 0.1% financial transaction tax\(^8\) would come into force in August regardless of whether or not the

\(^8\) Often called a 'Tobin tax' after 1981 Nobel laureate James Tobin, who first proposed it. A Tobin tax was also floated in the UK but not taken up by government.
European Union agrees to impose a similar tax applicable to the entire EU. Sarkozy said he hoped his move would push other countries into taking action. "What we want to do is create a shockwave and set an example that there is absolutely no reason why those who helped bring about the crisis shouldn't pay to restore the finances," Sarkozy said. "We hope the tax will generate €1bn (£800m) of new income and thus cut our budget deficit."

The country's national bank, the Bank of France, has already questioned the feasibility of a tax that will only be imposed in France and the nation's financial sector has been very vocal in its opposition. "A tax that's limited to France would weigh on growth, lead to a loss of competitiveness, and create a heavy handicap for the financing of the French economy," the French Banking Federation said after the announcement.

In September 2011 the European Commission suggested a tax of 0.1% on equity and bond transactions and 0.01% on derivatives, which it said could raise €55bn a year. European Union finance ministers are due to discuss the tax in March 2012. Several countries, including the UK, oppose the proposal that requires unanimous consent to adopt.

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.

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.

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

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.

Exhibit 6 – New Issues Raised

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>US Domestic New Issues</strong></td>
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<td></td>
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<tr>
<td>Investment Grade Debt</td>
<td>1,708.5</td>
<td>2,063.5</td>
<td>2,178.7</td>
<td>2,093.4</td>
<td>2,229.5</td>
<td>2,216.0</td>
<td>1,084.2</td>
<td>2,236.4</td>
<td>2,094.2</td>
<td>2,361.1</td>
<td>2,259.7</td>
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<td>Collateralized Securities</td>
<td>455.2</td>
<td>356.6</td>
<td>370.4</td>
<td>275.4</td>
<td>1,274.5</td>
<td>1,630.1</td>
<td>1,012.4</td>
<td>1,334.0</td>
<td>1,355.1</td>
<td>1,052.4</td>
<td>841.1</td>
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<td>High Yield Debt</td>
<td>66.5</td>
<td>190.4</td>
<td>114.0</td>
<td>188.0</td>
<td>119.3</td>
<td>95.5</td>
<td>130.9</td>
<td>141.0</td>
<td>137.5</td>
<td>77.1</td>
<td>10.6</td>
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<td>Municipal Debt</td>
<td>276.5</td>
<td>277.9</td>
<td>383.2</td>
<td>289.0</td>
<td>289.1</td>
<td>345.9</td>
<td>246.3</td>
<td>221.4</td>
<td>264.8</td>
<td>321.5</td>
<td>346.1</td>
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<tr>
<td><strong>Total</strong></td>
<td>2,504.2</td>
<td>2,980.0</td>
<td>3,466.9</td>
<td>2,605.2</td>
<td>3,678.5</td>
<td>3,649.0</td>
<td>1,906.0</td>
<td>4,332.2</td>
<td>4,178.3</td>
<td>3,273.1</td>
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<tr>
<td>Preferred Stock &amp; Conversions</td>
<td>25.4</td>
<td>48.3</td>
<td>39.5</td>
<td>98.3</td>
<td>98.8</td>
<td>72.0</td>
<td>44.5</td>
<td>52.1</td>
<td>53.1</td>
<td>65.5</td>
<td>137.8</td>
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<tr>
<td>Common Stock</td>
<td>385.0</td>
<td>241.5</td>
<td>236.7</td>
<td>166.0</td>
<td>188.1</td>
<td>155.4</td>
<td>331.3</td>
<td>170.1</td>
<td>1,011.1</td>
<td>117.8</td>
<td>368.6</td>
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<tr>
<td><strong>Total Equity</strong></td>
<td>411.8</td>
<td>289.9</td>
<td>276.4</td>
<td>244.3</td>
<td>263.9</td>
<td>227.4</td>
<td>220.0</td>
<td>223.2</td>
<td>214.2</td>
<td>104.3</td>
<td>285.3</td>
</tr>
<tr>
<td><strong>Total U.S. Domestic</strong></td>
<td>2,716.0</td>
<td>3,269.3</td>
<td>3,345.2</td>
<td>2,869.9</td>
<td>4,203.4</td>
<td>4,477.3</td>
<td>4,204.8</td>
<td>4,252.8</td>
<td>4,746.5</td>
<td>4,062.8</td>
<td>3,918.1</td>
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<td><strong>International Issues</strong></td>
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<td></td>
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<tr>
<td>Euro Investment Grade Debt</td>
<td>2,660.4</td>
<td>2,711.7</td>
<td>3,481.2</td>
<td>3,344.2</td>
<td>3,307.4</td>
<td>3,386.6</td>
<td>2,889.6</td>
<td>2,589.1</td>
<td>2,155.8</td>
<td>1,434.6</td>
<td>1,136.8</td>
</tr>
<tr>
<td>Euro Collateralized Securities</td>
<td>254.0</td>
<td>232.9</td>
<td>608.4</td>
<td>369.3</td>
<td>1,107.5</td>
<td>1,166.4</td>
<td>935.6</td>
<td>341.6</td>
<td>243.7</td>
<td>146.9</td>
<td>138.9</td>
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<tr>
<td>Euro High Yield Debt</td>
<td>311.2</td>
<td>342.6</td>
<td>140.4</td>
<td>88.8</td>
<td>148.3</td>
<td>179.7</td>
<td>351.9</td>
<td>102.8</td>
<td>68.4</td>
<td>32.6</td>
<td>34.0</td>
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<tr>
<td><strong>Total International</strong></td>
<td>3,222.9</td>
<td>3,371.8</td>
<td>4,230.2</td>
<td>4,264.3</td>
<td>4,519.3</td>
<td>4,554.2</td>
<td>3,489.7</td>
<td>3,633.0</td>
<td>2,405.9</td>
<td>1,554.8</td>
<td>1,559.1</td>
</tr>
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<td><strong>Total International</strong></td>
<td>295.0</td>
<td>459.0</td>
<td>453.0</td>
<td>361.7</td>
<td>415.3</td>
<td>299.4</td>
<td>114.2</td>
<td>151.9</td>
<td>58.4</td>
<td>53.7</td>
<td>82.8</td>
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<tr>
<td><strong>Total International</strong></td>
<td>3,517.0</td>
<td>3,796.0</td>
<td>4,232.2</td>
<td>4,626.0</td>
<td>4,978.8</td>
<td>5,163.6</td>
<td>3,995.1</td>
<td>3,185.2</td>
<td>2,525.3</td>
<td>1,686.5</td>
<td>1,641.9</td>
</tr>
<tr>
<td><strong>Global Total</strong></td>
<td>6,273.7</td>
<td>7,039.3</td>
<td>8,068.4</td>
<td>7,495.8</td>
<td>9,248.2</td>
<td>10,248.9</td>
<td>7,793.6</td>
<td>7,438.0</td>
<td>7,718.0</td>
<td>5,731.3</td>
<td>5,609.8</td>
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<tr>
<td><strong>Global Syndicated Bank Loans &amp; NPLs</strong></td>
<td>4,405.0</td>
<td>3,751.9</td>
<td>2,265.5</td>
<td>3,514.1</td>
<td>5,246.1</td>
<td>4,511.9</td>
<td>4,008.0</td>
<td>3,076.0</td>
<td>2,106.3</td>
<td>1,602.2</td>
<td>2,396.6</td>
</tr>
</tbody>
</table>

Source: Thomson Financial Securities Data, Investment Dealers’ Digest

Exhibit 7 – M&A Transactions

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

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Transactions</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>US Domestic</td>
<td>454.4</td>
<td>421.2</td>
<td>392.4</td>
<td>470.2</td>
<td>886.0</td>
<td>780.9</td>
<td>677.6</td>
<td>474.3</td>
<td>264.1</td>
<td>220.8</td>
<td>379.0</td>
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<tr>
<td>US Cross-Border</td>
<td>217.1</td>
<td>216.9</td>
<td>315.4</td>
<td>270.2</td>
<td>368.7</td>
<td>272.3</td>
<td>168.1</td>
<td>117.9</td>
<td>91.6</td>
<td>46.6</td>
<td>153.6</td>
</tr>
<tr>
<td>Intra-European</td>
<td>365.7</td>
<td>265.2</td>
<td>202.2</td>
<td>539.0</td>
<td>823.3</td>
<td>639.4</td>
<td>506.8</td>
<td>335.9</td>
<td>290.4</td>
<td>252.1</td>
<td>317.6</td>
</tr>
<tr>
<td>European Cross-Border</td>
<td>223.7</td>
<td>176.9</td>
<td>138.3</td>
<td>268.9</td>
<td>429.6</td>
<td>242.5</td>
<td>194.4</td>
<td>166.2</td>
<td>148.9</td>
<td>92.8</td>
<td>148.9</td>
</tr>
<tr>
<td>US-European Cross-Border</td>
<td>(42.1)</td>
<td>(72.3)</td>
<td>(75.0)</td>
<td>(163.6)</td>
<td>(353.1)</td>
<td>(155.9)</td>
<td>(126.2)</td>
<td>(61.2)</td>
<td>(46.9)</td>
<td>(46.4)</td>
<td>(71.9)</td>
</tr>
<tr>
<td>All Other</td>
<td>321.3</td>
<td>449.1</td>
<td>299.0</td>
<td>306.6</td>
<td>367.7</td>
<td>322.5</td>
<td>312.2</td>
<td>194.3</td>
<td>150.0</td>
<td>141.4</td>
<td>164.9</td>
</tr>
<tr>
<td><strong>Global Total</strong></td>
<td>1,540.1</td>
<td>1,475.9</td>
<td>1,103.2</td>
<td>1,792.2</td>
<td>2,729.7</td>
<td>2,081.7</td>
<td>1,734.3</td>
<td>1,193.6</td>
<td>828.1</td>
<td>767.6</td>
<td>1,091.9</td>
</tr>
<tr>
<td><strong>US/Total</strong></td>
<td>43.6%</td>
<td>43.2%</td>
<td>47.9%</td>
<td>42.1%</td>
<td>45.5%</td>
<td>49.6%</td>
<td>48.8%</td>
<td>46.9%</td>
<td>43.0%</td>
<td>34.8%</td>
<td>48.8%</td>
</tr>
<tr>
<td><strong>Europe/Total</strong></td>
<td>38.3%</td>
<td>33.1%</td>
<td>30.9%</td>
<td>45.3%</td>
<td>45.9%</td>
<td>42.4%</td>
<td>40.5%</td>
<td>39.2%</td>
<td>44.6%</td>
<td>47.2%</td>
<td>42.7%</td>
</tr>
<tr>
<td><strong>US Domestic/Total</strong></td>
<td>29.5%</td>
<td>28.5%</td>
<td>35.6%</td>
<td>26.7%</td>
<td>32.5%</td>
<td>36.6%</td>
<td>39.1%</td>
<td>39.6%</td>
<td>31.9%</td>
<td>28.8%</td>
<td>34.7%</td>
</tr>
</tbody>
</table>

Source: Thomson Financial Securities Data.
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.
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, and on February 15, 2012, Moody’s announced that it may cut ratings of 17 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.”

If the rating downgrades occur as indicated (during the Spring of 2012), the highest rated global capital market bank (BNP) will be A1; four banks (Credit Suisse, Barclays, Deutsche Bank and JP Morgan Chase) will be A2; two (UBS and Goldman Sachs) will be A3, and the rest of the top ten (Morgan Stanley, Citigroup and Bank of America) will be dropped to Baa2, only two notches about junk status. For most of the banks such ratings would be far lower than at any time in their history, and would likely further increase their funding costs from their present levels.

Decline in Stock Prices

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 five year period from February 2007 until February 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,

Exhibit 9 -- Declining Stock Prices of US and European Capital Market Banks

(Source: Goldman Sachs)

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25%. The stocks of the five largest European capital market banks (Deutsche Bank, UBS, Credit Suisse, Barclays and BNP) were closely packed around an average 70% decline. See Exhibit 9.

A partial recovery in stock prices occurred in 2009, but even so, the market capitalization of the top ten global capital market banks (reflecting some considerable amount of new capital raised) declined $270 billion, or 33%, from $800 trillion in December 2009 to $530 billion in December 2011.

Exhibit 10 illustrates the extent to which the markets had turned against capital market banks three years after the crisis. The market price-to-book value ratio of the top ten banks declined during this period to 0.58 from 1.08. The banks had been forced to raise tier 1 capital to 13.8% (well above required levels), which together with protracted weak conditions in trading markets, contributed to a sharp decline in ROI to an average of 10.4%, or 5.9% below the average cost of capital of these banks. This differential (ROI less cost of capital) is known as “economic value added” (EVA). The average EVA for these 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 2011, JP Morgan Chase (1.65%).

Litigation, 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 compensation incentives and a disregard of the law 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.

The public anger at banks was widely covered by the media and even the most highly regarded banks before the crisis were subject to intense investigations by journalists whose reports were well read. Government regulators were active on many fronts, especially in the US, 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.). In addition the SEC secured settlements from Goldman Sachs ($550 million), Citigroup ($230 million) and JP Morgan ($154 million) of civil charges of fraud in connection with selling mortgage-backed securities to hedge funds and other institutional investors. Additional charges for misrepresentation in the sale and underwriting of mortgage-backed securities are pending against several bankers. Altogether, these various charges are expected to result in legal charges to the banking industry of additional billions of dollars.
Exhibit 10
Wholesale Banks Capitalization Data
($ billions, 12/31/2011)

<table>
<thead>
<tr>
<th>Ranked by</th>
<th>Market Capitalization</th>
<th>MV</th>
<th>MV/BV</th>
<th>MV/EPS</th>
<th>ROE</th>
<th>Tier 1 Assets</th>
<th>Beta</th>
<th>Coast of Capital(a)(b)</th>
<th>ROE-COC</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP Morgan</td>
<td>126</td>
<td>0.71</td>
<td>8.00</td>
<td>11.00</td>
<td>12.30</td>
<td>2,266</td>
<td>1.23</td>
<td>9.35</td>
<td>1.65</td>
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<tr>
<td>Citigroup</td>
<td>77</td>
<td>0.43</td>
<td>7.60</td>
<td>7.80</td>
<td>13.60</td>
<td>1,875</td>
<td>2.55</td>
<td>17.32</td>
<td>-9.52</td>
</tr>
<tr>
<td>Bank of America</td>
<td>56</td>
<td>0.28</td>
<td>0.10</td>
<td>12.69</td>
<td>2,296</td>
<td>2.20</td>
<td>15.21</td>
<td>-15.11</td>
<td></td>
</tr>
<tr>
<td>BNP</td>
<td>51</td>
<td>0.54</td>
<td>7.42</td>
<td>8.80</td>
<td>9.60</td>
<td>2,555</td>
<td>1.82</td>
<td>12.91</td>
<td>-4.11</td>
</tr>
<tr>
<td>UBS</td>
<td>46</td>
<td>0.78</td>
<td>10.20</td>
<td>10.70</td>
<td>18.40</td>
<td>1,649</td>
<td>1.76</td>
<td>12.55</td>
<td>-1.85</td>
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<tr>
<td>Goldman Sachs</td>
<td>44</td>
<td>0.69</td>
<td>9.10</td>
<td>5.90</td>
<td>13.80</td>
<td>949</td>
<td>1.40</td>
<td>10.38</td>
<td>-4.48</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>34</td>
<td>0.76</td>
<td>5.60</td>
<td>13.10</td>
<td>13.80</td>
<td>3,078</td>
<td>2.22</td>
<td>15.33</td>
<td>-2.23</td>
</tr>
<tr>
<td>Barclays</td>
<td>33</td>
<td>0.33</td>
<td>9.30</td>
<td>5.80</td>
<td>12.90</td>
<td>2,409</td>
<td>2.54</td>
<td>17.26</td>
<td>-11.46</td>
</tr>
<tr>
<td>Credit Suisse</td>
<td>29</td>
<td>0.80</td>
<td>11.50</td>
<td>6.00</td>
<td>15.10</td>
<td>1,104</td>
<td>1.38</td>
<td>10.26</td>
<td>-4.26</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>29</td>
<td>0.48</td>
<td>10.80</td>
<td>3.90</td>
<td>16.60</td>
<td>784</td>
<td>1.54</td>
<td>11.22</td>
<td>-7.32</td>
</tr>
<tr>
<td>Average</td>
<td>53</td>
<td>0.58</td>
<td>8.84</td>
<td>10.41</td>
<td>13.22</td>
<td>1,588</td>
<td>1.86</td>
<td>13.18</td>
<td>-5.87</td>
</tr>
<tr>
<td>US Average</td>
<td>66</td>
<td>0.52</td>
<td>7.80</td>
<td>5.74</td>
<td>13.80</td>
<td>1,636</td>
<td>1.78</td>
<td>12.70</td>
<td>-6.96</td>
</tr>
</tbody>
</table>

(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 10 – Wholesale Banks Capitalization Data

European banks were exposed to some of these charges related to activities in the US. In addition, Barclays faced charges related to its acquisition of Lehman Brothers assets and several banks were involved in investigations of rate rigging in the LIBOR and foreign exchange markets. UBS settled a criminal complaint related to encouragement of its client to evade US taxes with the US Department of Justice for $780 million in 2009 and the DOJ then turned its attention to Credit Suisse and other Swiss banks which it claimed did the same thing as UBS.

In his State of the Union address in January 2012, President Obama announced the formation of a special task force in the Department of Justice to pursue as diligently as possible those banks and others involved with financial fraud during the crisis.

At no time since the 1930s had large banks been held in lower esteem by the general public, nor been required to pay so much for the adjudged misconduct.

Diagnostics

There were two maladies affecting the global banking industry in early 2012, nearly five years after the financial crisis first began to form:

One of these is the cyclical nature of financial markets, which since 2008 have been bound up in the Great Recession that has reduced demand for capital and advisory activities of banks, and produced occasions when levels of stock market volatility were as high, or higher, than at any time in the past 20 years.
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 in all financial assets.

Corporate capital market transactional activity is still at the low end of the cycle, five years after peaking.

Fixed income new issues, however, have been structurally affected by the loss of confidence in the asset-backed securities sector, which includes “structured finance” and securitization. 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 that has deterred recovery of residential prices, 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.

There is also a question of whether the long cycle of lowering interest rates, which has provided a long-bias to traders and market makers in fixed income securities for more than thirty years – thus affecting the willingness of banks to undertake proprietary trading activities and aggressive market making to supplement their basic sources of revenue – may have ended. The yield on ten-year US Treasuries has been in nearly continuous decline since 1980 (when they yielded 16%), but has probably bottomed out at current rates (1.67% in
September 2011). See Exhibit 12. This long decline in rates followed a thirty-two-year period after World War Two during which rates rose continually. Present rates are affected by government and Federal Reserve interventions, to be sure, and these efforts may continue until satisfactory employment levels are achieved – and this may take some time – but the apparent next leg of the cycle is for protracted rate rises, which may not be consistent with the recent trading activities of major banks.  

**Structural Factors**

The other malady is the need for structural reform before the global capital markets industry can fully return to normal. The most apparent indicator of this need lies in the increasingly negative EVA generated by the top ten capital market banks since 2008. The banks also suffer from substantially downgraded credit ratings and an investor reluctance to assume their paper might be bailed out in future crises.

These banks are burdened by the prospects of complying with the great variety or new regulatory requirements: Dodd Frank, Basel III (and the 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 – both of which new rules are still pending); and the need to comply with compensation restrictions and other regulatory requirements (which in the US under Dodd-Frank are very extensive – and expensive).

Altogether, changes in regulation for the top ten banks has caused returns to be reduced, thus sharply lowering their realized returns on equity to levels well below the 15%-20% they were before the crisis. A recent study by Morgan Stanley and Oliver Wyman points out that 5% to 6% of peak year ROE was the result of high leverage levels that will be curtailed by Basel III, and that regulatory and related factors will decrease ROE for major global banks by 7% to 9%, before strenuous management efforts to mitigate these, reduce them to a more tolerable 4%-6%.  

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 rethinking basic business models.

Further, 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

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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 of systemically important banks, thus limiting future growth rates for these banks.

Banks also must face the fact that their large scale, competitively aggressive, multi-platformed business models may have lost the confidence of their investors. 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.

Most global banks are now regarded as too-big-to-manage effectively, as their recent history of write-offs, downgrades, legal and regulatory controversies, and management turnover have presented a picture of an industry out of control, not one ready to be precisely rebalanced without regard to prior business decisions, legacies and commitments. Because of their enormous size – the top ten banks average over $1.7 trillion in assets – these are considered potentially dangerous by their regulators, requiring strict controls to protect against systemic failure. This, together with the lost reputational value resulting from a blame-ridden public image and continuous litigation, has limited the banks’ ability to secure favors or easier treatment in their relations with regulators or legislators.

**Alternative Structures**

Banks can adjust their structural situations in three different ways.

**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 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.12

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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, also suffering from a cyclical downturn, which averaged in 2011 a positive economic value added of 1.00% and a market to book ratio of 1.15. These banks had relatively modest commitments to investment banking. The two largest, Wells Fargo and HSBC, had market capitalizations at December 31, 2011 of $145 billion and $136 billion, respectively, as compared to $126 billion for JP Morgan Chase, which had the largest market capitalization among the capital market banks. See Exhibit 13.

Indeed, since the 1980s, large banks have had mixed experiences with wholesale and investment banking. In 1984, Continental Illinois, the seventh largest bank in the US, failed after a series of major wholesale losses in lending to oil and gas operators, and other industrial borrowers. Competition for mandates and industry rankings led several wholesale banks to push credit considerations aside in their effort to build up their lending books. Prior to its merger with Travelers in 1998, Citicorp had announced that it would substantially scale back its wholesale lending and capital markets activities, which had caused it so much trouble during the banking crisis of 1984-1994.

In the 1990s, three of the UK’s largest clearing banks, Barclays, National Westminster, and Lloyds all experienced losses and reputational problems from their wholesale lending activities and scaled them back substantially. In 2000,

\[\text{EVA} = \text{ROE} - \text{Cost of Capital}(a,b)\]

Exhibit 13 – Global Retail Bank Capitalization

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National Westminster Bank was acquired by the much smaller Royal Bank of Scotland (RBS) after a series of mishaps in investment banking had weakened the bank sufficiently to allow for the sale.

In 1998 Bankers Trust Company was sold to Deutsche Bank after being sued by a major client, Procter & Gamble, for abusing it in a derivatives transaction, a specialization Bankers Trust had developed.

After the merger and the departure of John Reed, Citicorp’s CEO, Citigroup returned to aggressive wholesale financing activities, which proved for a second time to be nearly fatal for the bank. It was required to write off approximately $10 billion from loan losses, fines and legal settlements during the 1999-2006 post-technology bubble period. Wholesale activities in the mortgage finance area brought the ban to its knees again in 2008. Struggling to recover, at December 31, 2011, investment banking continued to comprise 34% of Citigroup’s revenues. However, its stock was trading then at 0.43 of book value, with economic value added of -9.45%.

Bank of America emerged through many mergers during the 1990s and 2000s into the nation’s largest commercial bank, with only limited investment banking activity. Its stock price performed better than all other major banks in 2000-2007. However, it became a major capital market bank after acquiring Merrill Lynch under duress in 2008. Merrill’s retail brokerage business may be appropriate for Bank of America to retain, but it has had difficulty successfully integrating Merrill’s large, capital-intensive investment banking component while trying to “right size” the parent company business as a whole and return it to sustainably profitable operations. The stock market, which at December 31, 2011 valued Bank of America at only 0.28 of book value, with economic value added of -15.1%, might see a divestiture of the wholesale business, through a sale or spinoff, as a positive step.

Barclays Bank also has a relatively short, recent history in investment banking, dating from its opportunistic acquisition of the US business of Lehman Brothers in 2008. Before then, Barclays had operated a mainly fixed-income and currencies business based in London which was retained after Barclays decided to retreat in the early 1990s from the investment banking business it had entered through its BZW subsidiary in 1986. BZW was formed by the acquisition of a leading London stock broker and a leading “jobber” (market maker). Afterwards, Barclays confined its investment banking activity to the fixed income and currency areas, appointing Robert Diamond, an American executive hired from Credit Suisse First Boston, in 1996 to head it. Diamond pushed to rebuild the bank’s full range of capital market activities and to acquire the US assets and employees of Lehman Brothers after its bankruptcy in 2008. Diamond became Group CEO in January 2011. In 2011, investment banking comprised 53% of the consolidated profits of Barclays Bank.

Barclays, however, now must face the UK ringfencing difficulty. This essentially requires it to separate its nonUK and capital market activities from its UK
business and run it as an independent, stand-alone operation. This may be difficult to do as its sizeable investment banking operations must depend on markets (not depositors) for funding – with no assurance of support from either Barclays or the UK government. As Barclays has to split in two anyway, maybe it would be better off spinning off the investment bank (perhaps relocating it to New York where it might even be downsized enough not to constitute a systemically important nonbank under Dodd Frank) to avoid its downward drag on Barclays stock price. At year-end 2011, Barclays was trading at 0.33 times book value with an economic value added of -11.46%, despite a large market share of profitable UK retail banking.

Similar to Barclays, the two largest Swiss banks, UBS and Credit Suisse, face regulatory pressures (Swiss Finish) so strong as possibly to render a major investment banking business nonviable. Both Swiss banks have announced that, in order to comply with much tougher capitalization ratios, they will substantially reduce their risk-weighted assets, most of which are in the investment banking units, by 50% or more. This will essentially leave the banks as underwriters and advisers in the market, after giving up proprietary trading and much of their market making activity. Doing so will substantially reduce their wholesale banking revenue flows (but also their risk) and protect and increase the relative value of the banks’ crown jewels, their very large and profitable wealth management businesses. Such adjustments should in time enable the stock of these banks to be valued much more highly as asset managers (3 to 4 times book value) rather than as capital market banks.

**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. Key to this is the extent to which a bank commits its balance sheet to “mandate seeking” by offering to put up capital at competitive prices in exchange for the assignment to manage a transaction. Such actions involve banks making bridge or other loans for extended periods, to be distributed or refinanced when market conditions permit. The capital costs of supporting large inventories of securities purchased at aggressive (i.e., below-market) prices, under the new rules, will be economically challenging at best for systemically important firms.

Indeed, the shift into the role of “bidding for deals” has been a reflection of both heightened competition after the repeal of Glass-Steagall, but also of the 31 years of generally rising fixed-income markets that often have protected big bidders against market losses. The banks will need to emphasize their distribution capabilities rather than their willingness to hold assets (even when hedged) indefinitely when soliciting mandates. This may be easier to do that it seems if the market for wholesale risk migrates as we expect to the less costly
nonsystemic areas within capital markets that are best accessed through the
distribution units of the large players.

For JP Morgan, market making and accommodation of client demands is key to
its market-leading business model (its “fortress balance sheet.”) JP Morgan is
eager to organize and lend large sums to clients on short notice, and to receive
in return mandates for subsequent refinancing, underwriting and merger advisory
assignments. In 2011, investment banking comprised 35% of JP Morgan’s net
income of $19 billion and it continued to have the largest market share in new
issues and originations. It does not want to give up much of anything it presently
does, and believes that structural problems are less problematic for it than the
cyclical downturn, but it will have to reexamine how best to its fortress business
model with the new rules that diminish its ROE.

Deutsche Bank recently appointed – for the first time in its history -- two co-CEOs
to replace long-serving CEO Josef Akermann. One, Jurgen Fitschen, a German
national whose roots are in the domestic business, the other, Anshu Jain, an
Indian-born UK citizen, has been tied to the capital markets business conducted
out of London. The domestic business was expanded after 2010 by a series of
investments in the former postal savings bank, Deutsche Postbank, culminating
in the acquisition of a majority stake, which led to ownership of 94% in February
2012. Prior to this, investment banking activities comprised 55% of Deutsche
Bank’s net revenues, and all indications are that the new management team
wants to preserve this business. In November 2011, Deutsche Bank announced
that its entire asset management business would be sold for €1-2 billion in an
effort further to simplify and streamline the bank’s business.

Goldman Sachs, like JP Morgan, emerged from the crisis in relatively good
condition. Indeed, 2009 was a record year in which it earned $13.4 billion in
profits, 79% of which were derived from Institutional Client Services (sales and
trading) and Investing and Lending (proprietary investing). Goldman is
substantially committed to a “flow trading” business model, which attempts to
integrate all the market information from all its activities into advantageous
trading decisions and client support. Goldman Sachs, however, with an EVA in
2011 of -4.5% also needs to reduce risk-weighted assets to improve its ROE,
which it can do by distributing securities acquired in market-making rather than
holding them.

Goldman Sachs is also the most committed of all the top ten banks to the
management of “alternative assets” (hedge funds, private equity and real estate)
which are effectively to be disallowed by the Volcker Rule, though it will have
several years to disengage. It may decide that its extensive alternative asset
management business (which is larger than Blackstone’s, an industry leader)
may be better off distributed to shareholders if could be permitted to operate as a
nonsystemic nonbank without the regulatory burdens that Goldman Sachs itself
cannot escape.
Morgan Stanley is the smallest of the top ten banks, with market capitalization at December 31, 2011 of $29 billion, reflecting a market to book value ratio of 0.48 and EVA of -7.3%. In 2009, Morgan Stanley made a major strategic change in forming a joint venture with Salomon Smith Barney (of which it would hold 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 (Morgan Stanley Smith Barney is currently valued by the two parties at between $15 billion and $20 billion.\textsuperscript{14} Buying out Citigroup’s interest would involve issuing substantial additional equity, which at current prices may be difficult for Morgan Stanley to do.

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 retail brokerage business is not as capital intensive as investment banking, so absorbing the joint venture could be beneficial to Morgan Stanley (and for Citigroup for which a sale of its remaining interest would return about $10 billion of tier 1 capital), but continuing to be under the systemically important 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 decide to separate the brokerage and investment banking businesses, though this would be a complex and expensive process.

\textbf{Adapting to Survive}

The investment banking business goes back to the 19\textsuperscript{th} 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.

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

\textsuperscript{14} David Reilly, “can Morgan and Citi Broker a Deal?,” \textit{The Wall Street Journal}, March 27, 2012.
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 nonviability 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.

March 30, 2012