Financial Futurology: What Financial Institutions May Soon look Like

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Trying to perform an exercise in guessing how financial markets and institutions will look like in the future why we are still in the throes of the current crisis is difficult if not impossible. Still, I will venture a few guesses at possible directions – some good and some bad -- the course of future regulation may take.

Once again, as in so many prior financial crises, the current crisis has generated widespread calls for new and more regulation, local, worldwide, coordinated and uncoordinated. And as in so many other episodes, the new regulations may not only prove onerous but will probably contain a design more suitable to fighting the last crisis than to ward off new ones. And the general rage of the public has also called for the modern equivalent of public lynching of the bankers and other market participants that were responsible for the meltdown. To avoid this trap of fighting last war instead of concentrating on designing regulation that prevents future crises that will probably prove different, at least in form, the past crises. I will argue that this crisis, as in most financial crises in the United States, had its roots in incentives created by the last wave of reform that followed the thrift crisis of the 1980s. Any intelligent design of regulation will have to take into account the way investors arbitrage new set of rules according to some simple behavioral axioms that I will lay out below. The idea is to create regulation or a set of rules that can react to how investors will to void restrictions on leverage and find creative ways of creasing potential upside in investments that, by definition, relies on credit or leverage., Unfortunately, what will likely come out of the US Congress will probably more reflect the current crisis instead of setting down a set statutes that allows regulation to evolve as financial innovation evolves.

If we look at the different regulatory efforts over the last 30 years, the problems that we now face are not really new except for some of the complexity. Excessive leverage is the denominator in all known financial crises. The buildup of complexity was fomented by successive regulatory reforms that were backward-looking in nature, i.e., fighting the last war. Leverage, if not the cause, certainly is the explosive in each of these financial crises. And the buildup of leverage through vehicles created to avoid restrictions on leverage has proven not only explosive but nuclear in the financial devastation wrought throughout the world. Hence, when designing financial reform, regulators must assume that financial intermediaries will try to find ways to increase leverage beyond whatever limits that regulators impose, especially during times of lower volatility. In retrospect, the ease at which financial institutions "gamed" the system created by Basel I and II to create incredible levels of leverage is almost embarrassing.[1]

In the short space of this article, I will try to outline a number of important but sometimes unnoticed aspects of regulation and the crisis that go unnoticed in many analyses. To do this, the first section presents a caricature of how actors in financial markets behave. The second looks briefly at how the regulatory framework has evolved recently with regulator's eyes firmly focused on the past. The thirds section revisits the problem faced by regulators between financial stability and economic growth. I then look at the regulators and question the wisdom of creating one regulator to look at all markets and then offer some recommendations and compare them to the likely outcomes. I conclude by looking at the implications for Brazil of what we will likely see in the new developed country financial system. Before we set about trying to get a whiff of what the financial institution of the future, I will lay down a set of behavioral axioms that seem to describe financial institution behavior, whether bank or nonbank.

[1] Dobson and Hufbauer (2001) and Gaper (2009).

(Mis)Behavior of Financial Institutions: A Few Absolutes

1. **If financial institutions and investors can leverage, they will.**
2. **If financial institutions can lay off risk on the government at little cost, they will and leverage it.**
3. **The more regulation, the more opportunities to hide things from regulators and investors.**
4. **If investors lose money, they will try to recoup it from intermediaries and the government.**
5. **If financial institutions can become too big (or complicated) to fail, they will.**

Basically, investors and financial institutions will continually try to make all gains from investing private and socialize any losses.

In designing any type of regulatory reform, these axioms of investor and financial institution behavior should remain first and foremost in reformers minds. If on the other hand, regulators will probably plant the seeds of the next financial crisis.

50 years of Fighting Prior Wars

A brief look at the regulatory history of the United States over the last 50 years shows a Hegelian dialectical sequence of regulatory efforts destroyed by the subsequent financial crisis[2]. The first that comes to mind is the serious problems of disintermediation of thrift institutions during the escalating inflation of the 1970s. With the advent of two oil shocks in 1972 and 1979, inflation escalated to post-war highs in the last 1970s. Thrift institutions faced interest rate ceilings on bother their loans and deposits (Regulation Q for savings accounts). As depositors

[2] Kane (1988) describes competitive regulation in the United States through Hegelian dialectical term. Gruben and Welch (1994) use the same analogy when looking at the financial market negotiations around the North American Free Trade Agreement.

fled into higher earning assets, thrifts faced serious problems of liquidity. This led the liberalization of interest rates in the early 1980s. The escalation of interest rates then transformed a liquidity problem into a solvency problem (very similar to what Brazil experienced in the late 1960s in the early days of the BILLIONH and the revamped SFH).

The subsequent reforms allowed thrift institutions create liabilities that could better compete with bank and nonbank liabilities. The subsequent increase in funding to thrifts combined with oil and housing booms in the southwest of the United Stets to create a boom that ended in bust in the second half of the 1980s. The responsibility for the thrift bust in the late 1980s was laid at the feet of the McFadden and the Glass-Steagall (the Banking Act of 1933) Acts.[3] The McFadden Act restricted the geographical area in which any chartered bank could operate. This limited the ability of banks, especially thrifts, to diversify assets across different economic regions with distinct economic characteristics. The Glass Steagall act limited the types of instruments created distinct restrictions for different types of intermediaries on what assets and liabilities they could create. These two acts combined to limit the ability of banks to diversify risk over regions and over products. The McFadden Act was repealed by the Riegal-Neil Act of 1994. The Glass-Steagall Act was repealed by the Gramm-Leach-Billey Act of 1999 during a series of financial reforms that relaxed these restrictions allowing for the formation of truly national banks and also the formation of multibanks that could operate in many different types of financial markets. If this weren't impulse enough for conglomeration, the perception that the Fed and Treasury would not allow larger (or now more complicated) banks to fail -- based upon the experiences in the 1980s with the Latin American debt crisis and the thrift crisis – fed the fire of conglomeration in the 1990s. The result was not only a huge consolidation of the

[3] For a succinct outline of the evolution of financial market regulation in the United States, see Mishkin (2007), chapter 11. For an critical exposition on Basel I and II, see Dobson and Hufbauer (2001).

banking system but a movement to diversify in every way. Nationally, Bank of America gobbled up Nations Bank and then Fleet Bank after Fleet had absorbed Bank of Boston. Citibank ended as an amalgamation of Travelers Insurance and a myriad of other banks including Salomon Brothers and Smith Barney (later spun off). Chemical Bank merged with Chase that was later absorbed into JP Morgan now known as JP Morgan Chase. Credit Suisse swallowed First Boston and then DLJ. The list goes on and on. These banks all began to use derivatives, securitization, and other strategies (value at risk, for one) to manage and diversify risk

Only a couple of investment banks held out against the conglomerating money-center banks: Bear Sterns, Lehman Brothers, and Goldman Sachs. These independent investment banks all seemed to perform extremely well, at least until 1998. These investment banks and the capital markets divisions of the multibanks were the generators of the structures that took assets of the balance sheets of banks. Although to give these structures leverage and backing, banks lent to the structures and also provided backstop letters of credit so that if anything went wrong and the structures lost their funding, the assets would migrate back to the banks' balance sheets. Also, the derivatives or structures themselves do not really create leverage. It is the lending bank behind the trade that creates the leverage.

All this was fomented by regulations embedded in Basel I and II that, ironically, were supposedly designed to increase the security of the international financial system. Capital requirements in Basel I unduly penalized long-term lending To remedy that, Basel II recommended the banks secure rating agency ratings for their assets and the risk weightings – the amount of capital that banks would need to hold against different types of assets -- with the lowest risk weightings given to AAA(S&) and Aaa (Moody's) rated assets.

And here is where the Basel II had to deleterious effects: 1) increased the ability of banks to hide risk exposure off balance sheets and 2) made their capitalization increasingly procyclical.[4] Basle II made risk weightings on long-term assets based upon market ratings provided by Moody's, Standard and Poor's, and Fitch. This arrangement created huge incentives for securitization and structuring of loans, pushing banks to pursue the so-called originate to distribute" business model. Not only did this push the securitization industry in issuing Asset Backed Securities (ABS) which repackaged portfolios of credit card, automobile, and student loan debt but also the more specific mortgage backed securities (MBS, commercial and residential). The ever present populist pressure to extend affordable housing led the Clinton administration to create incentives for minimum documentation mortgage loans – the so-called subprime mortgage market – and authorized the GSEs – Fannie Mae, Ginnie Mae and Freddie Mac – to participate in giving liquidity to the corresponding MBS.[5] Even a mini subprime crisis in 2002 did not stop the activities of the GSEs on the contrary despite the efforts of the Bush administration to either shut down or control their activities. On the contrary, not only did congress overrule the Bush efforts but they expanded the intermediation in low income housing and in subprime markets. What was at that time a USD 2 billion loss on USD 500 billion in assets has now ballooned to uncalculated losses on more than USD 1.4 trillion in assets.

Finally, we cannot ignore the role that monetary policy played in the current debacle.[6] By most measures of monetary stance, the US Federal Reserve was overly easy during the period 2001 to 2006. The increase in leverage over the period was certainly underwritten by the Fed policy of keeping nominal interest rates at 1% for a very long time. Still, demographics led China, Japan, and Western Europe to save significantly more than they invested, leaving them to

[4] See Dobson and Hufbauer (2001).
[5] See Calomiris (2009 among others.
[6] For a critical analysis, see O'Driscoll (2009),

export capital and run current account surpluses. The run-up in commodities prices pushed many emerging countries into current account surpluses, even though these countries, in more normal circumstances, should have imported capital. And although the demographic trends starting in around 2005 would have the United Stated increase its desired savings rates, the insipient downward pressure on world real interest rates, actual savings actually fell. The United States was the only country capable of absorbing world savings, at least for a while. Despite low interest rates, good price inflation remained well behaved. The huge demand for long-dated US Treasury bonds by saving nations kept the yield curve flat (Lana Greenspan's so-called "conundrum") no matter what the Fed did with the Fed Funds rate. Gauging the correct monetary stance in this environment using a nominal interest rate as a policy tool was made difficult by the fact that the market stopped giving signals to the monetary authority. Still, monetary policy in the United States fomented unsustainable asset price increases.[7]

Not all the eventualities of the thrift crisis ended up as causes of the current crisis. The creation of the Resolution Trust Corporation (RTC) managed by the FDIC, after much travail, ended up separating and liquidating bad assets in a relatively efficient way. But even in the current crisis, in attempt to prevent failures of the largest banks, government intervention has allowed the US Treasury to deal with the large national banks leaving the Federal Deposit Insurance Corporation or FDIC (also created by the McFadden Act of 1933) to deal with smaller but still substantial region banks including Indy Bank (USD 11.5 billion) and BankUnited (USD 4.9 billion).

With all the regulatory zeal pronounced by politicians and analysts alike, this small survey serves as a reminder that this episode saw at least as much, if not more, government

[7] I resist calling this a bubble because we need to take into account the US tax system that contains huge incentives for overleveraging. The problems with world interest rates combined with these tax incentives makes me less inclined to place undue blame on the US Federal Reserve.

failure as market failure. In designing new regulation, reformers need to resist the temptation to squelch the important intermediation role that banks and nonbank financial institutions play in economic growth and development.

Financial Stability vs. Growth: A Taxonomy

Because of recurrent financial crises over the last four decades, policy makers in emerging economies are constantly trying to find the right balance between financial stability and the financial sector underwriting growth.[8] Many emerging countries have put such tight restrictions on their banking systems, for example Brazil, to allow them to weather large shocks but limited their ability to underwrite sustained growth[9]. The current crisis is forcing developed countries to face this same dilemma for the first time in many years, perhaps since the Great Depression. Certainly, excessive leverage was, and usually is, the fuel if not the cause of financial crises. But domestic financial systems in emerging countries have only recently become deep enough to play a significant role in underwriting growth. And the temptation to over-regulate financial systems in the developed world is great. Creating a safety deposit box banking system is just as much a suboptimal outcome as allowing excessive leverage. Mohammed El-Erian (2009) has made this point in expecting, pessimistically, that the government may try to turn banks and nonbank financial institutions into mere public utilities[10], without leverage, risk taking and laden with burden-sharing. Although we are a little less pessimistic, we think that would prove a mistake.

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[8] See Welch (1992) and Welch (1996) for how Latin American countries face this tradeoff.

[9] See Gruben and Welch (2001)

[10] El-Erian (2009, p. 5.

Who Will Regulate? Who Will Regulate the Regulator?

Many observers have called for a new, mega-regulator (Group of 30 2009 and Chatham House 2009). And some in the United States have proposed that the central bank, the US Federal Reserve, take the role of the mega-regulator. We would argue against this eventuality as has Calomiris (2009). This would serious compromise the independence of the central bank and not necessarily prevent another crisis. The US Federal Reserve, the Bank of England, and the European Central bank have taken on substantial financial risk by providing liquidity to markets seriously affected by the crisis by extending the definition of qualified collateral and financing increasingly toxic assets. In theory, this should not pose a problem even in the eventuality of losses on those assets However, countries with undercapitalized central banks, such as Argentina in the late 1980s, typically have serious problems of credibility and have difficulty in implementing monetary policy. Moreover, until a credit event occurs, the central banks will accrue significantly high revenues on this financing that can be used against possible future losses. Such a situation not only implies that central banks should have minimum capitalization ultimately underwritten by the country's treasury, but also that as long as central banks are taking credit risk, they should be regulated like any other intermediary. Hence, putting increased regulatory power at the central bank increases possible conflicts of interest and creates incentives that would hinder crisis prevention.

One of the other evidently true allegations is that regulators were complacent and asleep at the wheel. Concentrating regulatory power in one regulator increases the chances of complacency. The hallmark of US regulation is that its regulatory agencies (Federal Reserve, The Comptroller of the Currency, the state banking commissions, the SEC, the FDIC) are

overlapping and compete with one another.[11] Bu the lack of such a defuse structure in individual European countries did not avoid the same complacency problems or financial crisis that occurred in the United States. Some analysts have pointed out that this complacency was abetted by the move to consolidate more regulatory power under the SEC through their in consolidated coverage of large investment banks.[12]

Edward Kane (1988) argued that competing and overlapping regulatory agencies lead to more efficient and better regulation than in a structure that has a single regulator. We would argue that competition between regulators, under the right circumstances, would help mitigate complacency and certainly would also help protect against capture by regulatory agencies by financial intermediaries. In designing a new regulatory framework, our view is that a reasonably competitive environment between regulatory bodies is an objective to pursue, not something to avoid.

Likely vs. Better Financial Regulation in the Developed World

In this short discussion, I have argued that the reforms that were bread of the prior financial crises. What resulted was a piecemeal combination of liberalization and regulation that encouraged leverage and allowed financial institutions to hide the degree of leveraging. These reforms also caused procyclical capitalization to become even more procyclical. I did not deal in detail with this particular aspect of the financial reforms as they are dealt with more than sufficiently elsewhere.[i] But I agree wholeheartedly with the recommendations concerning the adoption of progressive capitalization policies.

But reformers must go further than that. Reformers should design regulation that looks forward, is dynamic, and should allow transparent but adequate risk taking (leverage). I have

.[11] See Kane (1988).
[12] For example, (Harrington 2009).

argued against moving to a centralized mega-regulator, especially centralizing bank regulation under the central bank. Regulators should try to create a constructively dynamic regulatory framework with competitive agencies that concentrate on different levels, markets, and institutions that would help protect against regulatory complacency and capture. In the United States, this would entail a complete examination of the roles of the Federal Reserve, the Comptroller of the Currency, the state banking commissions, the FDIC, and the self regulatory agencies such as the SEC. That examination has already started. Certainly, the thesis and antithesis are struggling to give us a new synthesis.

In the United States, there is always the temptation of reemploying the restrictions of Glass-Steagall and McFadden. But this would prove a mistake also. Those acts were repealed for good reasons, as outlined above. What we will probably get is a hodgepodge of the existing system – that is, the synthesis -- with much stronger, probably excessive, restrictions on leverage and capitalization. We also expect a larger but not monopolistic regulatory role for the Federal Reserve. And we should expect continued political intervention. All this adds up to a financial system that inhibits rather than enhances the prospects for future growth, at least in the domestic economies of the United States, Europe including the United Kingdom, and Japan.

Implications for Brazil of Financial Repression in the G7

What I have outlined for the United States and its G7 companions is a period of over regulation, financial repression if you will. Because the focus of this particular episode of deleveraging is in the main domestic, I do not think that the medium effects on international financial flows will go beyond the large contraction that occurred after the September failure of

Lehman Brothers. Other than some clear moves to force banks to lend domestically rather than internationally, the object of the current reforms is not international lending per se. Also, the Brazilian economy – that is, private sector firms, commercial banks and the government itself – have already adjusted to the sudden stop of bank credit in 4Q2008. As stability returns to the international financial system – not necessarily recovery – financial, mainly trade financing has returned to the Brazil, albeit at higher interest rates.

The reforms now contemplated by authorities in the United States, Europe, and Japan will only affect Brazil indirectly by encouraging continued deleveraging of their banks. Although securitizing of future flows of all kinds such as credit cards and automobile loans had made its way to Brazil's shores, but were of small scale. Moreover, the structuring market for Brazilian corporate and sovereign bonds was also extremely limited as witnessed by the fact that the only institutions willing to sell protections through credit default swaps (CDS) were investment banks and Brazilian banks. A true CDO market for Brazilian external bonds had not really developed. Some structures, such as plain vanilla total return swaps on Brazilian government local bonds also existed but this did not entail a large amount of leverage and merely acted as a way for institutional investors to have access to local market bond without having to go through setting up trading accounts at local banks. An embryonic MBS had as yet not started against a mortgage market that represents roughly 2% of all credit extended.

All this means is that much of the proposed financial reforms in the G7 will not directly affect Brazilian banks. But they may affect them indirectly. With some of the most capitalized banks in the world, a number of Brazilian banks are using the opportunity created by the crisis to expand abroad. Hence, any foray into international markets means that Brazilian financial institutions will have to comply with regulatory frameworks that do not necessarily correspond to that in the local market in Brazil. Although a full elaboration goes way beyond the scope of

this short chapter, corporate governance of Brazilian banks is stricter than in the G7 but other regulations are more lax. This will require some adaptation among Brazilian banks. Still, the future expansion of Brazilian banks internationally is more of a given than a speculation.

Finally, I do not expect regulatory changes in the G7 to adversely affect portfolio investment, especially in equities, and foreign direct investment. On the contrary, the relative ease with which the Brazilian financial system absorbed the shock of September 2008 and the quick adjustment of the balance of payments and businesses to the changing international economic environment put Brazil among the few countries that will emerge from the crisis with enhanced stature. Brazil's economy, financial market, and financial institutions have a bright future over the next decade, both at home and abroad.

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[i] See Group of 30 (2009) and Chatham House (2009).