

Reregulating and Restructuring the Financial System: Some Critical Provisions of the Dodd-Frank Act

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Introduction

The financial crisis of 2008 was not unforeseen (Galbraith 2009). It was preceded by clear warning signals with developments during the crisis that confirmed the underlying fault lines that had emerged as changed institutions, products and practices shifted the structure of the global system over the preceding decades. The transformation from a bank-based to a market-based global system dominated by large, multinational institutions based in major developed countries had occurred with minimal adjustment to the regulatory framework and no attention to the implications of those changes for systemic soundness. Among the major indications of systemic vulnerability were the unprecedented growth of financial sectors relative to the economies in which they were located; the absence of constraints on credit growth that led to unsustainable levels of debt for households, governments, some business sectors and the financial sector itself, and the extraordinary increases in international capital flows that exacerbated the pro-cyclicality of finance in both boom and downturn.

The outcome of the crisis has been deeply punishing for real sectors in many of the world's economies and, while it has led to numerous serious efforts by public agencies and independent analysts to ascertain its causes, it has not, so far, led to an equally serious effort to address those causes in ways that will prevent a recurrence. The Dodd-Frank Act is a case in point. To many it seemed to go through the motions of a major reform effort, giving nominal recognition to problem areas without, however, confronting many of the structural issues that had caused the collapse. But Dodd-Frank is worthy of careful analysis precisely because it helps lay out the structural issues in ways that could move the reform effort in a more constructive direction.

This paper will discuss two major aspects of the Dodd-Frank Act to point out how it both succeeded and failed in identifying and addressing structural faults in the global system. The success story relates to those provisions that deal with the interconnectedness of financial institutions. The failure is the Act's reaffirmation of pro-cyclical capital requirements as the primary tool in the post-crisis regulatory framework.

Part I: Interconnectedness

Interconnectedness is one of the critical clusters of related causes of the crisis. It resulted from the extraordinary growth in indebtedness within the financial sector that facilitated higher leverage ratios and rising levels of speculative trading for institutions' own accounts. As the amount of short-term borrowing and lending among financial institutions expanded, markets for repurchase agreements and commercial paper became primary funding sources, forging a chain that linked the fortunes of many institutions and various financial sectors to the performance of a few of the largest and exacerbated systemic vulnerability. Increased profits and compensation masked the growing vulnerabilities in the system but the crisis outcome was inevitable given:

¹ Concentration in over-the-counter (OTC) derivatives markets was another channel that created an excessive degree of interconnectedness. When Lehman Brothers was placed in bankruptcy in September 2008, that bank alone was counter-party to \$100 billion derivatives transactions involving 6,500 different institutions and

- the build-up of unsustainable debt for individual institutions and the system as a whole;
- systemic undercapitalization as inflated on- and off-balance sheet positions increased risk from falling prices and the potential loss of funding, and
- the heightened potential for loss of confidence as opaque markets for funding and OTC derivatives increased uncertainty about prices, volumes of transactions and the positions of counterparties.

In short, interconnectedness created the conditions for a financial disruption of the magnitude of the crisis of 2008. The major achievement of the Dodd-Frank Act is that, if properly implemented, the provisions in sections 609, 610 and 611 can reduce the interdependence of US institutions. They do so by limiting banks' credit exposure to their affiliates and to other financial institutions in relation to capital and by providing a comprehensive definition of credit exposure to include repurchase agreements (repos), reverse repos, derivatives transactions and securities borrowing and lending.

The growth in short-term, non-desposit funding. The development of exorbitant interconnectedness within the global financial system began with practices in the external (euro) markets where roughly 80 percent of total borrowing and lending reflects transactions among financial Institutions (BIS, Annual Report). Interbank lending also grew in the US domestic market in the 1970s but a new stimulus was added with passage of legislation (Gramm-Leach-Bliley) in 1999 that gave banks permission to borrow in order to fund traditional and non-traditional activities. US regulators and the Congress were sympathetic to bankers' complaints that reserve requirements acted as a tax on bank profits by limiting the amount of total deposits that could be loaned; that non-deposit sources of funding were needed to make banks competitive with other domestic financial sectors and overseas offices. But they were culpable in failing to constrain banks' exposure to other financial institutions – a breach of traditional banking practice over many centuries that had limited loans to individual borrowers as a prudent tool of diversification. As a result of this liberalization provision and the failure of regulators to curb exposures to financial counterparties, outstanding repos grew from about \$1 trillion in 2000 to \$4.3 trillion before the collapse of Bear Stearns in March 2008 (Sakoui 2010).

Banks' ability to borrow from other financial institutions in US wholesale markets not only increased their lending and reduced the amount of their funding subject to reserve requirements, it also increased funding for investment banks, hedge and private equity funds and mortgage brokers. This propelled growth in the financial sector with total sector debt rising from 63.8 to 113.8 percent of GDP over the decade ending in 2007 (Federal Reserve, *Flow of Funds*).² US national income and product (NIPA) accounts show financial corporations' profit rose from an historical average of about 10 percent to reach a record level of 40 percent of total corporate profits in 2001-2003, falling back to about 30 percent in 2007. But the growing importance of financial activity as a source of profits and the increased reliance on other financial institutions to fund that growth weakened the link between the

corporations (Mackenzie 2010). By mid-year 2011, 5 large US institutions accounted for 95 percent of the US and half of the global markets.

² The growth in financial sector debt was not unique to the US. The collapse in Iceland revealed that the assets of its three largest banks amounted to over ten times the country's GDP (Wade 2010) and the Bank of England (2009) noted that the balance sheet of its banking sector had grown three-fold from 2000 to year-end 2007.

financial sector and the real economy. Economic activity became less of a foundation for financial opportunity. The profitability of the largest institutions no longer depended on the growth and profitability of their nonfinancial customers. Moreover, the assumption on the part of the largest institutions that they were using their own rather than other people's money undermined their sense of fiduciary responsibility.

Funding shifts fuel debt and interconnectedness. Liquidity expansion and debt creation are typically under the influence of central banks. The Bank for International Settlements (BIS) has argued that the run-up in debt of both financial and nonfinancial sectors in the period 2000 to 2007 reflected excess liquidity created by the central banks of the major industrial countries (BIS 2004). Others have asserted that the prolonged period after 2002 during which the Fed maintained zero to negative short-term interest rates fed the housing bubble and encouraged speculation. But whatever the merits of these arguments, financial institutions also played a significant role in enabling the explosion of debt that took place in this period. Without the constraints of reserve requirements – the traditional US monetary tool used to control the supply of money and credit – the largest institutions monetized debt through a pyramidal process of borrowing in short-term wholesale markets.

This process depended on the growth of the market for repo and reverse repo agreements. Banks, investment banks and hedge funds pledged assets on their balance sheets to back short-term borrowing in the repo and commercial paper markets and used the proceeds to buy additional assets. These additional assets were usually purchased to take advantage of differences in short- and long-term interest rates and were held off-balance sheet in the institutions' own (proprietary) trading accounts. The larger the amount borrowed, the larger the position and the higher an institution's profits. Larger positions could reap sizable profits even when margins were thin. Nevertheless, the excessive rise in the institution's debt might have raised questions from regulators and investors if not hidden temporarily or permanently in off-balance sheet accounts.

Meanwhile, the largest dealers in the wholesale funding markets – in particular, the banks and investment banks that serviced highly-leveraged hedge fund clients – also became highly leveraged. The first round of borrowing with owned assets was often used to buy additional assets that could then be pledged as collateral for more borrowing to finance reverse repurchase agreements. The rising demand for collateral fueled demand for government debt instruments and other assets such as mortgage-backed securities (MBS) and facilitated the rise of sub-prime mortgages to increase the supply⁵. The growth of synthetic assets such as collateralized debt obligations (CDOs) also fed what had become an insatiable demand for backing for short-term borrowing. The pyramidal nature of the process created a hollow system, increasingly dominated by speculation and removed from real economic activity. The addition of synthetic assets as collateral turned balance sheets into pure froth.

³ See Singh and Aitken, 2010, on "rehypothecation and the shadow banking system".

⁴ For purposes of reporting, repos were often hidden off balance sheet temporarily at the end of the month. They were also systematically and permanently hidden in certain off-balance sheet transactions and as funding for off-balance sheet conduits.

⁵ This process began with the 2005 bankruptcy code amendments that expanded the special treatment of repos from Treasury-backed repos to repos backed by mortgages and other securities (Taub, 2010).

The debt levels of financial institutions proved to be unsustainable. The run-up in short-term non-deposit liabilities made the financial systems of the major industrial countries more vulnerable to interest rate and price risks and the loss of funding⁶. Their vulnerability was intensified by the tight web of interconnections between institutions in the global system and by the absence of information about the scale of counterparty relationships and concentrations in lending by and to individual counterparties. In addition, the lack of transparency in the markets for assets used as collateral for borrowing contributed to the growing level of uncertainty that spread through the system beginning in the summer of 2007.

The tipping point for the collapse of the paper pyramid was the slowdown in the US housing market and the beginning of a dip in prices. Weakening housing prices precipitated margin calls on MBS collateral backing short-term borrowing and required charges against capital. Eroding capital undermined the credit worthiness of institutions, making it difficult and expensive to fund existing positions and prompting asset sales.

Interconnectedness accelerated the process as the need to preserve capital and uncertainty about counterparties' positions dried up the supply of short-term funding provided by financial institutions. In the wake of the Lehman bankruptcy, the collapse of the short-term wholesale markets — the epicenter of the credit freeze — intensified the downward spiral of falling asset prices given the disappearance of funding for potential buyers of assets that had to be sold. The immediate threat to the major institutions' capital positions revealed the inadequacy of capital to prevent or cushion the implosion. As a result of interconnectedness, loss of confidence — the usual trigger for financial crises — originated in the financial system and involved a run on the financial sector by the financial sector.

<u>How Dodd-Frank addresses the problem.</u> Sections 609, 610 and 611 of Dodd-Frank amend sections of four other critical federal financial statutes⁷ to take into account the expansion of transactions among financial institutions and changes in the kinds of transactions that channel credit flows. One major thrust of these amendments is their extension of previous limits on loans to non-financial borrowers under these Acts to include borrowers that are unaffiliated financial institutions.⁸ Another is that the amendments address changes in the kinds of transactions that have evolved in lending to both financial and non-financial borrowers to incorporate a broader definition of what constitutes credit.⁹

The new definitions of credit exposures made subject to limitations include:

⁶ Rising interest rates would increase the cost of funding an existing position while falling prices would result in calls for additional assets to top up the value of collateral.

⁷ These include the Federal Reserve Act, the National Bank Act, the Home Owners' Loan Act and the Federal Deposit Insurance Corporation Act.

⁸ Section 610 is the amendment that extends the previous limits on national banks' loans to individual non-financial borrowers in relation to their capital to financial customers – a class of customer not previously subject to these limits. It also amends the Home Owners' Loan Act to extend these limits to savings associations. Section 609 amends section 23A of the Federal Reserve Act to broaden the definition of credit exposures (included in section 610) under existing limits on transactions between a bank and its subsidiaries and affiliates. Section 611 amends the FDIC Act to provide consistent treatment of derivatives transactions to State laws governing lending limits of State banks.

⁹ These new definitions of what constitutes credit exposures are set out in section 610.

- all direct and indirect advances of funds under an obligation for repayment or that are repayable from specific property pledged by or on behalf of the person receiving the funds;
- national banks' contingent liabilities such as contractual commitments to advance funds (to the extent specified by the Comptroller of the Currency);
- and derivatives transactions, repo and reverse repo transactions and securities borrowing and lending.

In addition, an amendment to the National Bank Act provides a broad definition of derivatives that includes contracts, agreements, swaps or options based on the value of, interest in or quantitative measure of events or occurrences related to commodities, securities, currencies, interest rates, indices or other assets.

In other words, limits on the exposure to any client or affiliate in relation to a bank's capital will be based on an aggregate of all such transactions. Thus, the most important effect of these provisions will be to rein in the number of transactions between banks and other financial institutions and their credit exposure to any one financial institution. But by enlarging the list of transactions that constitute credit exposure, they also reduce the risk posed to banks by the increased use of transactions with nonfinancial customers outside the previous limits on loans. Limiting exposures to derivatives and contingent liabilities related to any one customer, financial or nonfinancial, will reduce the immense volume of banks' off-balance sheet liabilities and retard their future growth. In addition, limits on banks' credit exposures to other financial institutions will shrink the short-term wholesale funding markets. Other positive outcomes likely to be produced by these provisions include:

- shrinking the debt of the financial system (and the economy as a whole) as a share of GDP:
- reducing leverage and proprietary trading as funding becomes less available;
- reducing the size of the largest institutions that rely on wholesale funding for trading activities;
- raising the share of deposits subject to reserve requirements as sources of funding in credit markets and restoring the potential for Federal Reserve control over the supply of credit, and
- tightening the link between finance and the real economy by reducing the flow of credit to financial borrowers relative to flows to nonfinancial sectors.

<u>The outlook for the interconnectedness provisions.</u> These sections of the Dodd-Frank Act do not require studies before implementation or discretionary rulemaking by regulators. They are already embedded in the law and become effective in a very short period of time. ¹⁰ Institutions' failure to adhere to the limits and regulators' failure to enforce them will result in clear violations of the law. That is another aspect of the good news about these provisions.

 $^{^{10}}$ Sections 609 and 610 take effect at the end of July 2011 – one year after the transfer date – and section 611 takes effect 18 months after the transfer date.

The bad news is that, as time for implementation approaches, their potential effectiveness in reining in the abuses that the largest institutions have come to see as critical for their profitability is likely to bring them under attack. These provisions were incorporated into the bill introduced by Senator Christopher Dodd in March 2010 with no fanfare and little discussion. The focus of debate was elsewhere and it is still the case that many interested parties are unaware of their existence. Those who are interested in ensuring their implementation are waiting for a critical move by one of the responsible regulators to begin the process. But, given a deregulatory bias by majority Members in Committees with jurisdiction in the U.S. House of Representatives, such a move is certain to prompt the introduction of weakening amendments. At the time of this writing, the outcome for these provisions is uncertain.

Part II: Capital Requirements

The Dodd-Frank Act reaffirms the role of capital requirements as the primary tool in the post-crisis regulatory framework. The capital requirements of the Act and the rules proposed to implement them build on the most recent evolutionary stages of the Basel Agreement that, since 1988, has functioned both as a regulatory tool to moderate leverage and, theoretically, as the sole cushion against insolvency for individual institutions and the global financial system as a whole. The adoption and continuation of reliance on capital requirements reflects the view that market forces, not regulators, can and should constrain unsound bank behavior by providing or withholding capital from individual banks. The assumption undergirding this framework is the belief that markets can maintain equilibrium without government intervention – a belief that led proponents to favor dismantling the earlier regulatory framework based on quantitative restrictions¹¹ as undermining innovation and impeding market efficiency.

The focus on capital requirements in the two decades before the crisis led regulators to adopt an atomistic approach, focusing on the individual institution in isolation, ignoring the ever-tighter linkages between institutions and sectors and the systemic interactions that created. Changes in the quantity and quality of lending went unchallenged as did increasing concentration in the size of institutions and in the types of assets they held. Because profits were high, financial institutions were able to attract capital and the apparent adequacy of capital ratios – at least as measured against onbalance sheet assets – supported the belief that relying on market forces had, as promised, promoted a sound and efficient financial system.

But, in the aftermath of the crisis, it is clear that capital requirements are a tool that failed. While the Dodd-Frank Act and Basel III add some important revisions and additions to the capital adequacy paradigm, its reinstatement once again as the primary regulatory tool suggests the need for a more skeptical analysis of how capital functions to prevent or moderate the effects of financial dislocations. During the recent crisis, capital evaporated. What was originally seen as a liquidity crisis rapidly morphed into a threat to systemic solvency that required governments, not markets, to provide

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¹¹ Quantitative regulations that were ignored or dismantled by deregulation include reserve, liquidity, leverage and margin requirements; limits on loans and interest rates; loan-to-value ratios and limits on concentrations.

the capital cushion needed to prevent total collapse. Moreover, the ongoing pressure on capital in the wake of the crisis impeded efforts to revive credit flows and restart economic activity. Policymakers and regulators promised taxpayers that they would never again be called on to shore up the system but it is unclear that the reforms offered can buttress the regulatory foundation they perpetuate to the extent necessary to withstand future strains.

Meanwhile, the crisis made clear just how strongly capital requirements pushed institutions and the system as a whole in a pro-cyclical direction. It is not only that markets will supply capital in a boom and withhold it in a downturn, but that the impact on capital of changes in the value of assets has the same pro-cyclical effects. The downward spiral set in motion by falling prices and charges against capital in the fall of 2008 argues for a view of capital as a *threat* to solvency, not a cushion. There is simply not enough capital available in a downturn to safeguard individual institutions let alone a financial system.

Moreover, the suggestion that financial institutions raise and store large amounts of capital in good times that can be run-down if needed raises some concerns. It seems reasonable to ask how much of the available capital generated by savings in an economy should be allocated to finance as opposed to nonfinancial sectors to ensure balanced growth in economic activity. As Jan Toporowski notes, "a regulatory requirement to increase bank capital reduces the amount of capital available to nonfinancial firms" (2009, p.2). Indeed, the run-up in capital that supported the growth of the largest institutions in the decade before the crisis necessarily contributed to the rise in financial corporations' profits relative to nonfinancial corporate business. Meanwhile, given that the larger institutions have an advantage in attracting capital from institutional investors, requiring more capital may tend to increase levels of concentration within the financial sector. An additional concern is that requiring ever higher levels of capital to address heightened risk-taking may have the opposite effect. Recent experience suggests that the amount of growth and profitability needed to attract higher levels of capital tends to increase, not decrease, incentives to take risk.

<u>Comparing capital and reserve requirements.</u> While it is true that debate on reform included discussion of ways to make capital as well as provisioning requirements countercyclical, the outcome so far has been to endorse the idea and call for efforts to find ways to make it happen. Meanwhile, central banks in some emerging economies that had raised requirements to build up a cushion of reserves before the crisis were able to act countercyclically by lowering reserve requirements in 2008 to provide liquidity relief and restore the monetary transmission mechanism (Montoro and Moreno 2011)¹²

It is also true that there is agreement on the need for institutions to pay more attention to macro-prudential risks but, in the US, ¹³ concerns about macro-prudential risks are articulated as

¹² These countries also used reserve requirements to tighten monetary conditions in recent years to moderate the impact of capital flows that would be attracted by direct increases in the policy rate (ibid.)

¹³ See, for example, the Notice of Proposed Rulemaking (NPR) by the Office of the Comptroller of the Currency, the Federal Reserve System and the Federal Deposit Insurance Corporation on risk-based capital adequacy standards published in the *Federal Register*, Vol. 75, No. 250, December 30, 2010. The proposed rule gives a list of components institutions should use to evaluate levels of concentration (including concentrations of exposures and institutions' own share of markets for securities) in conducting stress tests but avoids imposing limits on any of

suggestions for undertakings by institutions on a voluntary basis. They reflect, at best, half-hearted efforts to restore elements of the previous regulatory and monetary paradigm that serve as reminders of what was lost in the process of installing capital requirements in place of the reserve system that evolved in the US after the creation of its central bank.

While the major reform of the Federal Reserve Act of 1913 was to create a new monetary system for the US, a no less important reform was to create a systemic cushion for banks by requiring them to hold a given percentage of their reserves with their regional Federal Reserve banks rather than as deposits with larger private banks in so-called "reserve cities" where losses had tended to amplify the reach of frequent speculative panics. As the System grew and evolved during the 1920s and 1930s, the Fed no longer required banks to pay-in reserves: it developed procedures for creating and extinguishing those reserves by undertaking open market operations on its own initiative. Changes in reserves became the primary tool to achieve the objective that had evolved within the Fed itself in its formative years: a commitment to countercyclical monetary policy using bank reserves and open market operations to influence the credit supply and interest rates. It was an objective and an operating tool that transformed the Fed from a passive to an active institution and inserted a monetary role into macroeconomic policy (D'Arista 1993).

The role of reserves as a cushion for the system was weakened in the late 1920s but reestablished under the Banking Act of 1935 that clarified and facilitated the ability of the Fed's open market committee to create and extinguish reserves by buying and selling Treasury securities. In 1951, when banks held 65 percent of financial sector assets and liabilities, their reserve balances with the Fed accounted for 11.3 percent of bank deposits and constituted a remarkably comfortable cushion for a segmented financial system in which banks loaned to other financial sectors with which they were not in competition. Fifty years later, however, the shift in credit flows away from banks and banks' use of borrowed funds and other strategies to reduce holdings of deposits subject to reserve requirements had virtually wiped out that cushion¹⁴. By year-end 2001, banks' reserve balances had shrunk to 0.2 percent of their deposits and banks' share of credit market assets had fallen to less than half the share they held fifty years before (Federal Reserve System, *Flow of Funds*).

During the 2008 financial crisis, the absence of a monetary cushion weakened individual financial institutions and made them more vulnerable to stops in external funding. As discussed in the previous section, borrowing and lending among financial institutions through repurchase agreements ceased to be an efficient channel for distributing liquidity as institutions' confidence in the solvency of their financial counterparties eroded. Had there been a large cushion of reserves held by the Federal Reserve banks, transfers of those accounts among financial institutions would not have been questioned; the credit crunch and the threat to the payment system could have been avoided. But the missing monetary cushion also impeded the Fed's ability to provide liquidity to the system as a whole. It

them in relation to capital, leaving it to the individual institution and the investors to whom the information is disclosed to determine the appropriate level.

¹⁴ The Fed's 1992 decision to remove requirements on savings deposits was a primary cause of the drop in reserves held with the central bank. Banks' own strategies included holding cash that qualified as reserves in ATMs and so-called sweep accounts that moved deposits into money market funds overnight to evade reserve requirements.

was forced to use unconventional means to address the collapse of liquidity in funding markets by swapping Treasury securities for riskier debt, extending its emergency borrowing program to nonbanks and providing term loans to banks.

A cushion of reserve balances owned by financial institutions but held by the Fed would be a far more effective way to maintain liquidity in the event of future shocks to the system. Because reserve balances retain their face value, an established pool of reserves is a more effective liquidity buffer than capital or the Fed's lending facilities because the reserve holdings of financial institutions are not subject to charges against their value as the value of institutions' assets decline. The reserve pool would, in fact, help moderate pressure for asset sales, stem the decline in their prices and thus protect institutional capital. While capital is and will remain a useful tool of soundness regulation as a constraint on leverage, numerator for ensuring the diversification of credit exposures and asset concentrations and measure of solvency for individual institutions, capital alone cannot protect the financial sector in the event of a systemic crisis. The Fed's struggle to ensure systemic reach for its efforts to provide liquidity suggests that it and other central banks should attempt to build a source of systemic funding within the monetary system that, like reserves, is renewable and immediately available to all financial sectors in a downturn. ¹⁵

Conclusion

The financial crisis of 2008 revealed the extent to which changes in financial structure had made the existing regulatory framework obsolete. For the most part, however, the reforms enacted and discussed so far have been focused on shoring up the existing framework to close the proverbial barn door through which, presently, all the big horses continue to escape. At this writing, US regulators are proposing ever higher capital requirements for "systemically important financial institutions" with little or no exploration of alternative quantitative measures such as leverage, liquidity and margin requirements and other macro-prudential policy tools (Wyatt 2011).

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¹⁵ See D'Arista 2002 and 2009 for discussions of how this proposed reinstatement of reserve requirements would improve the Fed's (and other central banks') ability to conduct countercyclical monetary policy and the changes in central bank and private financial institutions' balance sheets that would be required to extend central bank influence over the credit supply to all financial sectors.

The interconnectedness provisions of the Dodd-Frank Act also close an open door but are an exception to the trend in that they revise and update one of the oldest rules of sound banking – the requirement for diversity – to make it fit the practices of the current financial system and end abuses that have been created by exempting the financial sector itself from the rules that must be applied in extending credit to non-financial borrowers. If implemented as the law requires, these provisions will go a long way toward ending a major systemic vulnerability – the interdependence of financial institutions – while also curbing the debt build-up in the financial system and the excessive debt it has been able to create for non-financial borrowers. They are also more likely to shrink the excessive trading activities and thus the size of "systemically important financial institutions" than the higher capital requirements that are being proposed.

On the other hand, the potential these provisions have to assist in accomplishing such outcomes makes them highly vulnerable to weakening revisions. Other promising provisions of the Dodd-Frank Act that would increase transparency and shift derivatives trading to exchanges are currently under attack and are likely to be watered down by relentless lobbying during the rulemaking process. Nevertheless, as the structural vulnerabilities of the system have become more apparent, so have the responses needed to bring about more effective reform.

References

Bank for International Settlements (2002, 2004, 2005, 2008). Annual Report. Basel Switzerland.

Bank of England (2009). Financial Stability Report. June.

D'Arista, Jane (1993). The Evolution of U.S. Finance: Book I. Armonk, NY: M.E. Sharpe.

_____(2002). "Rebuilding the Transmission System for Monetary Policy". Howardsville, VA: Financial Markets Center.

______(2009). "Setting an Agenda for Monetary Reform". Working paper No. 190. Political Economy Research Institute, University of Massachusetts, Amherst.

D'Arista, Jane and Gerald Epstein, 2010. "Dodd-Frank and the Regulation Of Dangerous Financial Interconnectedness", in "The Future of Financial Reform: Will It Work? How Will We Know?", ed. Michael Konczal, New York: The Roosevelt Institute, October, pp. 13 - 22.

http://www.rooseveltinstitute.org/sites/all/files/Will%20It%20Work%20How%20Will%20We%20Know.pdf

Federal Reserve System. *Flow of Funds Accounts of the United States* (various years). Washington, DC: Board of Governors of the Federal Reserve System.

Galbraith, James K. (2009). "Who Are These Economists, Anyway?" *Thought and Action: The NEA Higher Education Journal.* Fall.

Mackenzie, Michael. (2010). "Repo market faces struggle to pull back from slump", *Financial Times*, April 15.

Montero, Carlos and Ramon Moreno. (2011). "The use of reserve requirements as a policy instrument in Latin America", *BIS Quarterly Review*, March. Basel, Switzerland: Bank for International Settlements.

Sakoui, Anousha. (2010). "Lehman unwinding creates a blueprint", Financial Times, April 21.

Singh, Manmohan and James Aitken. (2009). "Counterparty Risk, Impact on Collateral Flows and Role of Central Counterparties". IMF Working Paper 09/173. Washington, DC: International Monetary Fund.

Taub , Jennifer. (2010). "A Whiff of Repo 105", *The Baseline Scenario*. http://baselinescenario.com/2010/03/16/a-whiff-of-repo-105/

Toporowski, Jan. (2009). "Enforced Indebtedness" and Capital Adequacy Requirements, Policy Note 2009/7. Annandale-on-Hudson, NY: The Levy Economics Institute of Bard College.

Wade, Robert. (2009). "Iceland as Icarus", Challenge, summer.

Wyatt, Edward. (2011). "To Cushion Against Losses, Fed Considers Raising Capital Requirements for Banks", *The New York Times*, June 3.