SYSTEMIC FAILURE IN US CAPITAL MARKETS: LESSONS NOT LEARNED

Susanne Trimbath, Ph.D.

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Comments welcome; send correspondence to susanne@stpadvisors.com

WWW.STPADVISORS.COM
OMAHA, NE 68005
(402) 932-8888

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Susanne Trimbath, MBA, PhD

Creighton University, College of Business Administration, Department of Finance and Economics, 2500 California Plaza, Omaha, Nebraska 68178 USA

Correspondence Address : STP Advisory Services, LLC, PO Box 1252, Bellevue, NE 68005 USA

Susanne@STPadvisors.com +1 (402) 932 8888

Abstract:

Contrary to Allen and Carletti (2011), there were existing theoretical and intellectual frameworks for regulating financial systems – frameworks built on financial and economic studies of the importance of financial stability for prosperity – that could have prevented the systemic failure that led to the collapse of global capital markets in 2007-2009. This analytical article demonstrates the point by applying two well known frameworks to an examination of financial regulation in the United States during the period leading into (and shortly after) the recent financial crisis. This approach leads to a characterization of the relationship between financial infrastructure and financial market stability that is well aligned with existing theory about the policies that support the financial systems that provide the necessary conditions for economic growth and prosperity (Eatwell and Taylor 1998). The author finds that the United States failed to provide a systemically prudent framework in any of the four policy areas identified by Barth, Caprio and Levine (2001) through their analysis of thousands of responses to World Bank surveys from hundreds of countries. Further, financial regulators in the United States failed to fulfill the five tasks identified by Eatwell (2001) in a comprehensive examination of the regulatory factors that contribute to financial stability. If the financial crisis was not anticipated it was not because stability wasn't being studied and measured. It was more likely a failing in how things were measured rather than what was being measured that established the conditions under which the credit markets collapse was not prevented. This article concludes that more specialization – economically efficient specialization – in financial services is the way forward that will release the potential for economic gains from comparative advantage among financial market participants.

Keywords: Financial regulation, capital markets, international debt crisis, economic development, globalization. Classification code: G180 General Financial Markets: Government Policy and Regulation.

1 Introduction

There are existing theoretical and intellectual frameworks for regulating financial systems that could have been used to prevent the systemic failure in the United States that led to the collapse of global capital markets in 2007-2009. The approach in this paper is to generate a characterization of the relationship between financial infrastructure and financial markets that follows research based on World Bank survey data plus the work of Lord John Eatwell, Director of the Cambridge Endowment for Research in Finance and President of Queen's College. We find that the United States failed to provide a systemically prudent framework in any of the four policy areas identified by Barth, Caprio and Levine (2001) using the World Bank survey data. Further, financial regulators in the United States failed to fulfill the five tasks identified by Eatwell (2001) as the driving forces of effective regulation.

The United States financial system, which was at the center of the 2007/2008 collapse in global credit markets, failed to implement the policies and develop the regulatory structure that have been proven to support stability. While it is true that there is no "One-Size-Fits All" approach that will ensure financial stability for every country (Trimbath 2004), there are theories that have stood the test of time. The purpose of this paper is to put recent events into perspective not by comparing them to historical crises and collapses (as in Reinhert and Rogoff 2009) but by examining them in the intellectual context of what we know and understand about building, developing and maintaining stable financial systems.

The global financial crisis does not present an opportunity to, as Allen and Carletti (2011) suggest, invest in new theories for financial market stability. Cancelling decade's worth of study and analysis because a crisis has come home to the place where much of that research was conducted would be “throwing the baby out with the bathwater.” Granted, the recent crisis severely impacted countries that were believed to be fulfilling the requirements for a robust regulatory framework. However, as we demonstrate below using the United States as our example, the problems were more likely in the measurements used to apply the theories than in the theories themselves.

2 Four Policies and Five Tasks

We apply two primary frameworks. In a summary of the body of work advocating for an international financial authority, Eatwell (2001) specified five main tasks to be performed by any national financial regulator that are seminal to stable global markets. Independently, the World Bank compiled the results of a first-ever global survey on bank regulation and supervision in 1999. Working with that data and supplementing it with additional research to identify and resolve inconsistencies and missing values, Barth, Caprio and Levine (2001a) began establishing a comprehensive framework for financial system regulation. Based on their work, we can summarize four primary policies that have been shown to promote stable, national financial systems that support a strong economy and healthy capital markets (Trimbath 2004). We begin with the policies first published at the World Bank before addressing the financial regulators’ tasks.

2.1 Four Missing Policies

Barth, Caprio and Levine (2001a, henceforth “BCL”) summarize the results of their analysis of the World Bank survey data as generally "consistent with the grabbing-hand view of government: 'countries that implement rigorous, official oversight of banks produce higher levels of government corruption without a corresponding improvement in bank performance or stability.'" BCL acknowledged some characteristics in the US regulatory framework that were inconsistent with the "helping-hand" view (that "governments implement rigorous, official oversight of bank activities to alleviate market failures and thereby enhance bank performance and stability."). For example, BCL pointed out that the US deposit insurance scheme as described in the 1999 survey set-up the moral-hazard problem and "continue[d] to be a concern" in 2001. Their conclusion, that the safety net should not prevent depositors (and taxpayers) from holding banks accountable for their actions, played out across several actions of the US federal government during the last financial crisis. The other three policies – minimized government ownership, independent credit rating agencies and allowing banks to dabble in a broad range of investment vehicles – were just as central to the problem. (See BCL and Barth, Caprio and Levine 2001b for complete coverage of the theoretical and empirical literature on these four important points.)

Barth, Caprio, and Levine (2013) acknowledge that "measuring bank regulation and supervision around the world is hard." By necessity, some regulatory measures entered the BCL analysis (from the World Bank survey) as discrete or binary variables (see Table 1 in BCL). For example, on the question of a safety net for depositors the questions were:

> "8.1 Is there an explicit deposit insurance protection system? Yes / No"
>
> and
>
> "8.4 Were depositors wholly compensated (to the extent of legal protection) the last time a bank failed? Yes / No"

BCL overcome some problems by constructing indexes (including in some areas important to the present analysis on ownership, the activities of banks, and deposit insurance features) in order to synthesize responses to thousands of questions into a manageable statistical database. (See Barth, Caprio and Levine 2001b and 2013 for details on the construction and contents of the indexes they used.)

As we demonstrate below, more granular data that captures the nuances of a national government's willingness to support unstable financial institutions – and the non-financial companies that depend upon them – might provide more exact information in the future that would support the early recognition of regulatory problems in national (and, hence, international) financial systems.

2.1.1 Having some safety net but not so extensive that banks and brokers are not held accountable: When BCL wrote about "limiting the adverse incentive effects from generous deposit insurance" in 2001 the definition of "generous" was significantly different than it would become by the end of 2008. BCL would advocate strengthening monitoring by the private sector rather than opening the Treasury for bailouts (and/or turning on the Federal Reserve's printing presses). From 1980 until October 2008, the limit of the U.S. Federal Deposit Insurance Corporation (FDIC) was $100,000. In October 2008, Congress raised the limit to $250,000 temporarily and retroactively to January 1, 2008. As of July 21, 2010, when the *Dodd-Frank Wall Street Reform and Consumer Protection Act* (DFA) was signed into law, through December 31, 2012, the FDIC "provided *unlimited* deposit insurance" on non-interest bearing accounts (emphasis added, Berson and Berson 2012). Exactly this problem has caused consternation for many researchers; BIS' (2011) Committee on the Global Financial System lists "*ex post* versus *ex ante* availability of official liquidity" among the technical issues that complicate assessments of the availability of funds for settling international claims after a severe shock.

DFA made permanent the deposit insurance limit increase to $250,000. However, because the limit is measured "per depository, per insured bank, for each account ownership category" it is possible for a depositor to be reimbursed for more than $250,000 in losses. "Ownership categories" include single, retirement, joint, and trust accounts all of which could be used by a family of four to achieve up to $3,000,000 in coverage (FDIC 2013, p.18). From October 14, 2008 through December 31, 2010, the deposit insurance coverage was extended to *all* non-interest bearing bank deposits ("transaction accounts") under the Transaction Account Guarantee Program of the Temporary Liquidity Guarantee Program. This coverage applied *in addition* to the $250,000 FDIC insurance in effect at the time. The temporary, unlimited coverage was funded by $1.1 billion in fees collected from participating financial institutions; the reserve ratio did not exceed 0.9% before the program was ended (FDIC 2008).

In the meantime, the year-end Deposit Insurance Fund balance (which funds FDIC guarantees) fell from $52.4 billion in 2007 (a reserve ratio of 1.22%) to $22.7 billion in 2012 (June, latest available), a reserve ratio of just 0.32%. This happened despite levying an August 2009 emergency fee intended to replenish the fund plus requiring banks to prepay 3 years worth of premiums in September 2009. DFA established a requirement for the fund to maintain a reserve ratio of at least 1.35%. A proposal to meet the DFA requirement will not even be examined by FDIC staff until the reserve ratio reaches 1.15%. The fund is not projected to reach a reserve ratio of 1.15% until the end of 2018 (FDIC 2012) – nearly a decade after the legislative requirement for a 1.35% reserve ratio.

Discussing – and measuring – only the existing, traditional safety net of deposit insurance, however, ignores the additional funding which was provided by the U.S. Congress in the

Emergency Economic Stabilization Act of 2008 (the "Wall Street Bailout"), by the US Treasury in the Troubled Assets Relief Program (TARP), by the Federal Reserve System in the Term Asset-Backed Securities Loan Facility (TALF), etc., etc. In fact, the conversion of brokers into banks (which provided more financial entities access to the Federal Reserve Bank's assistance) overnight established new systemically important entities with "too big to fail" status. Certainly, some banks were allowed to fail in the months leading up to the initiation of these support programs – most notably Lehman Brothers. But this only amounted to the federal government picking and choosing winners and losers rather than the exercise of restraint advocated by BCL for "limiting the adverse incentive effects."

Shortly after the conversion to bank status, brokers (and some private, non-regulated corporations) received additional financial support from the Federal Reserve. We won't take it upon ourselves to enumerate each instance of the "extensive" "safety net" here. Suffice it to say that Bloomberg reporters Mark Pittman and Bob Ivry added up $12.8 *trillion* in financial rescue commitment on the part of the US federal government and its agents just through March 31, 2009.

Further, banks were not "held accountable" as recommended by BCL. The Government Accountability Office (GAO) and the Special Inspector General for the Troubled Assets Relief Program (SIG-TARP) reported that billions of dollars in loans were made by the US Treasury and the Federal Reserve System without proper documentation. The GAO (2011) examined no fewer than nineteen emergency support programs just from the Federal Reserve, many contracted for operation to outside parties without competitive bidding. Five of the nineteen programs remained open as of June 29, 2011. Other than loan repayment, no consequences were established for any of the recipients; in the case of non-financial, non-regulated entities receiving Federal Reserve money, only standard contract law was available to enforce repayment. Although some civil-fraud trials have gone forward and some fines have been levied, Justice Department prosecutors had put together only a few criminal cases through the end of 2012, mostly directed at fraud in the bailout programs.

Some of the Federal Reserve's financial support programs – especially those that directed funding to non-regulated companies – were done in cooperation with the Department of the Treasury. SIG-TARP Neil Barofsky identified the lack of transparency in "the process and criteria Treasury used to decide who would receive TARP funds and what the recipients have done with the hundreds of billions of dollars that have been invested" as "the most significant failing" of the bailout processes (Barofsky 2009).

2.1.2 Having less government ownership or control of national financial assets: The World Bank survey question analyzed by BCL for government ownership policy also offered a limited choice of responses. The question they addressed was "3.7 What fraction of the banking system's assets is in banks that are 50% or more government owned?" which implies that government ownership under the standard "controlling" threshold is not relevant. Similar to the question on a "safety net" and others that took binary and/or discrete answer formats, responses to this question could not consider the extent to which a government is willing to take ownership positions in exchange for financial support in times of crisis.

The US government took ownership positions in all major financial institutions during the bailout, plus several industrial companies with and without financial arms. GMAC and General Electric had financial arms (lending for consumer purchases), but Harley Davidson and Target did not. (See GAO's (2011) audit of the Federal Reserve for complete details.) Although lending to non-regulated companies violated a congressional prohibition on Federal Reserve activities, the Treasury Secretary in cooperation with the Chairman of the Federal Reserve was able to exploit a loophole in the law by making such loans available via Limited Liability Companies. Many of the financial support programs required the recipients to accept of some ownership by – or the collateralization of assets to – the federal government.

While it might be argued that the US federal government and Federal Reserve Bank participation in the greater economy through various bailout processes – including the taking of ownership stakes – could not have been foreseen, that argument would be specious. In fact, the US government has a long history of financial and economic participation in private industry in the past forty years. In 1970 the Federal Reserve Board provided reserves to commercial banks to meet the credit needs of their customers after Penn Central Railroad declared bankruptcy. Lockheed, ($1.4 billion) Franklin National Bank ($7.8 billion) and New York City ($9.4 billion) were all recipients of federal financial support in the 1970s. In the1980s, it was Chrysler Motors ($4.0 billion), Continental Illinois National Bank and Trust Company ($9.5 billion) and the savings and loan industry ($293.3 billion). Just after the terrorist attacks of September 11, 2001, the airline industry received $5 billion in compensation and $10 billion in federal credit instruments.

ProPublica (a public interest investigative newsroom, www.propublica.org), compiled a list of 926 recipients of $605 billion during the 2007/2009 financial crisis which so far has resulted in a net loss of $147 billion to taxpayers. In providing financial support to banks and businesses alike, "the Federal Reserve System stood ready to accept risks that the market participants were not willing to accept" (GAO 2011). As of June 30, 2012, the U.S. Treasury still owned 61% of American International Group, Inc., ("AIG") common stock (SIG-TARP 2012). Because AIG was the world's largest insurance company, the US government owns not just national but also international financial companies – an ownership standard that is not captured by the data available to BCL.

2.1.3. Having private independent rating agencies: The form of this question is, itself, an indication of the problem of "independence": "10.7.1 What percent of the top ten banks are rated by international credit rating agencies (e.g., Moody's, Standard and Poor[sic])?" These US rating agencies were only *technically* independent of government (i.e., they were not more than 50% owned by the government). The creation by the U.S. Securities and Exchange Commission (SEC) of the "Nationally Recognized Statistical Rating Organization (NRSRO)" designation – and its proliferation across SEC rules and regulations – resulted in rating agencies that were perceived by the financial markets that relied upon them as at least government-sanctioned if not quasi-government. An NRSRO is a credit rating agency that the SEC accepted for use to meet certain regulatory requirements. Although credit rating agencies were mentioned in SEC regulations as far back as 1975, the "NRSRO" designation was not codified until implementation of the *Credit Rating Agency Reform Act of 2006* when it became a government imprimatur, creating undue reliance on ratings by participants in financial markets (SEC 2012b). By that time, the "NRSRO" term already appeared in more than 15 SEC rules and forms (excluding those directly for NRSROs) plus rules in individual states and the self-regulatory organizations that populate US and international financial systems (Buckholz, et. al. 2009). US rating agencies lost their "technical" independence in the sense that they were now "authorized" or "sanctioned for use" by an arm of the Executive Branch of the federal government.

The NRSRO designation also created a barrier to entry with the potential to restrict competition, giving additional power to the producers/sellers of credit ratings. Two firms had a virtual monopoly on the rating industry, with the three largest firms (Moody's, Standard & Poor's and Fitch) issuing 98% of all outstanding credit ratings (Casey 2009). According to Magee and Magee (2008), the standard four-firm concentration ratio reaches critical value at 50% -- after which the industry is a monopoly, with non-contestable markets in which prices are easily controlled. The monopolist rating agencies created ratings for the primary dealers in the bond markets. According to data from the Federal Reserve Bank of New York (FRB-NY), in 2012 just 5 dealers controlled 68% of the corporate bond market, 60% of mortgage bonds, and 54% of the market for transactions in federal agency bonds (plus 55% of the market for US Treasury securities). These five banks (and about twelve more) have an "imprimatur" from the FRB-NY in the form of the "primary dealer" designation, affording them a status with problems similar to that of the rating agencies (i.e., the appearance of having been "vetted by a government agency" in the eyes of market participants). According to BCL, such barriers to entry into financial markets "are positively associated with government corruption."

In July 2008, prior to the passage of DFA in 2010, SEC staff "proposed removing the references to NRSROs" (Gallagher et. al. 2009). The use of these agencies was required in thousands of rules. Additional proposals first considered at the September 2009 open meeting of the SEC on credit rating agencies were designed to:

> "…decrease the level of undue reliance on the nationally recognized statistical rating organizations by beginning the process of removing references to NRSRO ratings in certain existing rules. It is time that we started this process to systematically minimize the use of ratings in the SEC's rules… ." (Gallagher et. al. 2009)

SEC staff and commissioners expressed long-term concern that the rules lent *undue legitimacy* to NRSRO ratings. The *Credit Rating Agency Reform Act of 2006* specifically prohibited the SEC from regulating an NRSRO's rating methodologies; which means that the SEC sanctioned the NRSROs and required the use of the ratings but had no control over the process. DFA gave the SEC the power to regulate NRSRO internal processes regarding record-keeping and how they guard against conflicts of interest which were determined (by several sources) to be a contributing factor to the 2007/2009 crisis.

Subsequent proposals would have required NRSROs to disclose a "record of model deviation" to explain the rationale for any material difference between a credit rating determined by their statistical model and the actual credit rating issued by the NRSRO. A statistical analysis by Griffin and Tang (2012) found that securities rated AAA between 1997 and 2007 should on average have been rated BBB following the credit rating agencies' own models and default standards without adjustment. Higher NRSRO credit ratings result in higher market prices (valuations) for securities; the difference identified by Griffin and Tang would have resulted in 20.1% lower average valuations.

DFA required SEC staff to carry out a study on the feasibility of setting up another self-regulatory organization to assign a "Qualified NRSRO" to provide ratings for structured finance products (see Pub. L. No. 111-203 § 939F(b)(2)). This would be, as generally pointed out in public comments to the SEC, "contrary to government efforts to reduce investor reliance on credit ratings…deemed vetted by" a government agency. (p32) The majority of the comments received also argued that this system "would not lead to a substantial improvement in the independence of rating agencies" (p.36).

Despite even pseudo-independence from government regulators, the NRSROs did not have independence from the financial institutions that paid them to rate the credit worthiness of their firms and their securities offerings. Gaining sanction from the SEC only gave the rating agencies more power to wield against – or in favor of – securities issuers. When internal emails surfaced during a congressional investigation into the matter former managing director at Standard and Poor's Frank Raiter spoke out to the media (NOW on PBS, December 26, 2008, "Credit and Credibility") saying, "During this period, profit was primary. Analytics were secondary." Despite the evidence, Standard and Poor's response was "Our ratings and our criteria...have always resulted from analytical considerations, not revenue considerations." SEC data reveals that since 2011, 171 rating agency staff reported taking jobs with banks and other bond issuers within twelve months of exercising decision making authority over ratings assignments for the same institutions.

DFA ended the federal requirement that banks buy securities *defined as investment grade by just a handful of companies* that the U.S. Securities and Exchange Commission designates as qualified NRSROs. We'll see in section 2.1.4. that this may open up new investment avenues for banks.

2.1.4 Allowing capital market participants to offer a wide-range of services so they can reduce the volatility of returns: The questions in this category had significantly more granularity than some of the others. Regarding bank activities in securities, insurance and real estate, BCL create an index in each area:

> "Unrestricted = 1 = full range of activities can be conducted directly in the bank; Permitted = 2 = full range of activities can be conducted, but some or all must be

conducted in subsidiaries; Restricted = 3 = less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited = 4 = the activity cannot be conducted in either the bank or subsidiaries." (BCL, Table 1.)

The wide range of activities available in the years leading up to 2007 turned out to have increased volatility by concentrating risk instead of dispersing it. We return to this issue in our discussion of the regulator's task of setting standards for activities like issuing credit default swaps in section 2.2.1. That this activity concentrated risk in AIG (and other entities) is not in dispute. In particular, as we will argue in Section 3.2, more specialization by financial institutions may lead to greater economic efficiencies, regardless of the important financial theory that supports diversification in bank investment portfolios.

As mentioned, DFA ended the federal requirement that banks buy securities defined as investment grade by NRSROs. Credit ratings are referenced by the Federal Reserve in 9 general risk-based rules, a market risk rule, 23 advanced approaches rules and 13 other Board regulations (FRB 2011). Given what we now know about these ratings and the actual riskiness of some AAA-rated investments, the requirement may actually have made bank investments more dangerous. The so-called Volker Rule (12 U.S.C. § 1851, nee DFA § 619) would prohibit banks from investing in hedge funds, but not from making investments to hedge the risk in their other investments (Berson and Berson 2012). The point may be moot, as several legal and legislative challenges have already arisen and remain unresolved at this time. Perhaps the way to handle the risks associated with accessing a broad range of investment vehicles is best handled, as mandated by DFA (§ 165(b)), through capital requirements addressing the risks that arise from activities in the newer, more exotic – and therefore less well understood – financial products including "derivatives, securitized products, securities borrowing and lending, repurchase agreements and reverse repurchase agreements" (Berson and Berson 2012). This agrees with findings in BCL.

It is not our purpose here to resolve how to regulate credit worthiness in the future, but only to demonstrate that the process followed in the years (even decades) leading up to the 2007/2008 collapse of credit markets was not one that would meet the BCL definition of "unrestricted." BCL stress that regulation and supervision which limit moral hazard and "that force accurate information disclosure … critically boost bank performance stability." This point is also emphasized in Eatwell's list of tasks necessary for a coherent national regulatory structure, as we shall see in the next section (2.2).

2.2 Tasks Not Taken

According to Eatwell (2001), the international financial system entered a new era with the financial crisis that occurred in the fall of 1998. Speaking at a meeting of the Western Economics International Association, Eatwell said, "The potential economy-wide inefficiency of liberalised financial markets was indisputable." In contrast and leading into his discussion of establishing an international financial authority, Eatwell summarized prior work done (with Taylor, 1998) on the five important tasks of the effective national financial regulator.

2.2.1 *Provision of information, including setting standards, to enhance market transparency*: BCL include this requirement for market transparency ("accurate information disclosure") in their analysis of the policies necessary for bank stability. For Eatwell it is not just the ideal of transparency "but also common standards of information to support the efficient operation of international financial markets."

The failure to fulfill this task was perhaps nowhere more evident during the US capital markets systemic failure than in the market for derivatives. As SEC Director of Financial Markets and Community Investment Orice Williams testified before Congress (2009): "The gaps in the regulatory oversight structure of and regulations governing financial products such as CDS [credit default swaps] allowed these derivatives to grow unconstrained, and little analysis was done on the potential systemic risk created by their use." Just as there were no standards for derivatives, the securitization of a variety of debt instruments – most notoriously mortgages – did not adhere to any standards. For example, when mortgage-backed securities were issued, most contained no provision for reporting to land offices (usually county-level property offices in the US) about changes in the ownership of liens from the originating bank to the purchaser (or issuer) of the Collateralized Mortgage Obligation (CMO). Hence, in more than one case, when a CMO investor attempted to foreclose on a property for payment delinquency, courts found insufficient documentation to support the CMO's lien on the property.

Without legally binding "receipts" of ownership, CMOs had insufficient real assets behind them. In one of the earliest court decisions on this issue, Cleveland District Judge Christopher Boyko (2007) dismissed a foreclosure complaint, writing that the "plaintiff reveal[ed] a quasi-monopolistic system." In 2009, former bankruptcy judge R. Glen Ayers spoke at a meeting of the American Bankruptcy Institute in Washington, D.C. (Bufford and Ayers, 2009). He spoke to the fact that not all CMOs were actually collateralized by mortgages. Ayers wrote with California District Bankruptcy Judge Samuel Bufford. In their article, "*Where's the Note, Who's the Holder*" Ayers and Bufford wrote: "A lawyer sophisticated in this area has speculated to one of the authors that perhaps a third of the notes 'securitized' have been lost or destroyed." That suggests that approximately $3 trillion of worthless mortgage bonds were issued by US financial entities and traded around the world (face amount estimated with market data from Securities Industry and Financial Markets Association).

2.2.2 Authorisation of market participants: Once standards are set, Eatwell's next required task for regulators is "ensuring that a business is financially viable, that it has suitable regulatory compliance procedures in place, and that the staff of the firm are fit and proper persons to conduct a financial services business." The US regulators failed to act in several areas critical to the potential prevention of the 2007/2009 financial crisis (e.g., establishing registration for hedge funds, establishing requirements for registering CMO issuers, etc.). Perhaps most spectacularly, they failed to act on loopholes in regulations which allowed insurance companies (like AIG) to issue credit default swaps in excess of existing prudent capital requirements via subsidiaries without direct supervisory oversight. Speaking directly to this issue, DFA established the Financial Stability Oversight Council to take a broad look at risk in financial institutions. They are tasked with designating "Systemically Important Nonbank" entities, although this designation takes place after the fact that the institution is already operating in the market.

The SEC was tasked in DFA with establishing rules for the registration of municipal securities advisors (financial advisors to states and local governments with respect to issuance), swap advisors (to municipal issuers), and solicitors hired by brokers/dealers "for the purpose of engaging a municipal entity or obligated person for or in connection with municipal financial products, or engaging an investment adviser to provide investment advisory services to or on behalf of a municipal entity."[1] Although the Municipal Securities Rulemaking Board was authorized by Congress in 1975 (Exchange Act § 15B(b)) to issue rules for the municipal bond

[1] See http://www.sec.gov/spotlight/dodd-frank.shtml for the most recent information on the SEC's progress toward implementing DFA.

market, according to SEC (2012a) it was “not granted authority to enforce its rules.” DFA corrected this oversight in 2010. In 2011, SEC Form ID was amended to enable a variety of new registrant types to submit filings on EDGAR (17 CFR Parts 239, 249, 269 and 274 [Release Nos. 33-9256; 34-65244; 39-2478; IC-29780]), including municipal bond advisors. After the registration requirement for municipal advisors became effective (October 1, 2010) the SEC “received approximately 1,000 confirmed registrations of municipal advisors, including approximately 300 registered broker-dealers, as well as approximately 700 other firms.” Therefore, more than two-thirds (700) of municipal advisors were unregistered prior to the 2007/2009 financial crisis and prior to the passage of DFA.

2.2.3 Surveillance to ensure that the regulatory code is obeyed: Without standards for performance or regulatory authorization of all market participants, of course, there could be no surveillance by any regulator. The list of un-monitored capital market products and activities (e.g., credit default swaps (Williams 2009), trading in bonds (Trimbath 2009) and Exchange-Traded-Funds (Bradley et. al. 2011)) left global financial markets vulnerable. Even where “most of the largest, most interconnected, and most highly leveraged financial firms in the country [US] were subject to some form of supervision” it proved to be “inadequate and inconsistent” (Treasury 2009). Today, even what we believe to be some of our most highly regulated and monitored financial markets – such as the market for common stocks and bonds – continue to produce significant volumes of activity off-exchange, ex-clearing and without surveillance (e.g., “dark pools”).

Where high values and volumes of activity are not under surveillance, there can be no risk management. This was the case in the US stock and bond markets. Despite growing concern in the decade leading up to the financial crisis over unsettled trades remaining in the national clearing and settlement system beyond the normal settlement period (see Table 1), the National Securities Clearing Corporation (NSCC) did not include fail positions in the formula for calculating deposits into the clearing fund used to protect NSCC against "exposure to participants' unsettled portfolios" (SEC 2005). Despite adding fail positions to the calculation in 2005, the NSCC clearing fund was insufficient to cover the fails until after the financial crisis reduced the volume/value of market activity. Although the worst did not come to pass (i.e., NSCC participants were able to reduce their fail positions without disruption), the magnitude of the systemic risk is evident.

Table 1 Fail Positions at NSCC in excess of Clearing Fund, 1997-2011 (US$000)

Year	Total Fail Positions	NSCC Clearing Fund	Obligations in excess of Fund
1997	2,641,664	932,815	1,708,849
1998	2,678,552	1,145,810	1,532,742
1999	4,547,322	*	*
2000	3,515,560	2,526,992	988,568
2001	3,796,512	2,855,313	941,199
2002	3,048,154	2,284,040	764,114
2003	6,050,934	2,468,774	3,582,160
2004	8,693,310	2,740,088	5,953,222
2005	6,846,056	2,639,734	4,206,322
2006	7,498,320	2,952,164	4,546,156
2007	14,909,296	4,866,576	10,042,720
2008	2,114,198	6,620,361	(4,506,163)
2009	1,996,088	2,940,950	(944,862)
2010	2,974,754	2,986,875	(12,121)
2011	3,255,386	3,857,532	(602,146)

Data compiled by author from National Securities Clearing Corporation annual financial statements. "Total Fails Positions" is the value of shares due to NSCC for trade settlement but not delivered by members in time for settlement, as of December 31 of Year; plus the value of shares covered in the Stock Borrow Program where shares are borrowed from Depository Trust Company members to fulfill some delivery failures at NSCC.
*Due to the merger of NSCC into DTCC, annual financial statements are not available for 1999.

2.2.4 Enforcement of the code and disciplining of transgressors: According to Eatwell, surveillance and enforcement "are the operational heart of any effective regulatory system"

(2001). BCL include some questions of enforcement and discipline – for example, they report (in 2013) that only 23 countries hold regulatory enforcement supervisors legally liable for their actions. In US capital markets, the National Securities Clearing Corporation permits offenders who fail to deliver securities in time for settlement of trades to maintain accounts with them for clearing and settlement. This is despite very specific language in the Securities Exchange Act of 1934 that "A registered clearing agency may summarily suspend and close the accounts of a participant who … (ii) is in default of any delivery of funds or securities to the clearing agency" (Section 17A National System for Clearance and Settlement of Securities Transactions (b)(5)(C); page 275 as amended through August 10, 2012). Similar problems were occurring at the same time in the market for US Treasury securities. During the fall of 2008, in particular, the primary dealers sold more than $2.0 trillion worth of bonds that could not be delivered to the buyers for eight weeks (based on data available from Federal Reserve Bank of New York).

We must conclude that even where codes existed to prevent some of the abuses that lead to instability in the financial system, they were not enforced. When sellers are allowed to create an infinite supply of financial instruments by selling more than they can deliver (or more securities than there are assets), and no punishment is in place for this behavior, then security prices will not have been set in efficient markets. Executive compensation, based on financial firm performance, establishes a perverse incentive structure that makes this bizarre pricing behavior profitable. According to the SIG-TARP (2012) report to Congress, the US Treasury has been selling some TARP investments at a loss to taxpayers, "sometimes selling its investment back to the bank itself" allowing even those banks who recovered financially to get out of the program for less than they owe. Criminal charges have been brought against those who cheated TARP, but those responsible for creating the situation that required TARP and other extraordinary bailout measures have not been called to discipline. Quite the contrary, many were paid elaborate bonuses at the same time their financial institutions were receiving bailout funds. The corruption described by BCL is no less evident in the "revolving door" between Washington and Wall Street that put a former bank attorney in charge of the SEC after instigating the termination of SEC whistleblower Gary Aguirre – whose termination resulted in a $755,000 settlement paid by the SEC in a wrongful discharge case.

2.2.5 Development of policies that keep the regulatory code up to date: Here Eatwell emphasizes the importance of the policy function, especially "as national financial boundaries dissolve and as new products are developed that transcend international boundaries." Brooksley Born, chair of the Commodity Futures Trading Commission (CTFC) from 1996 to 1999, raised enormous concerns over derivatives activity in the US – including credit default swaps – during her tenure. Both the SEC and the Federal Reserve Board of Governors objected to CTFC regulation over derivatives. On June 1, 1999, Congress passed legislation prohibiting such regulation, ushering in a long period of growth in the unregulated market until the virtual collapse of credit markets in 2007-2008. It wasn't as if nothing had been done to maintain regulatory codes in synchronization with financial innovation – as evidenced by the actions taken by Ms. Born, opportunities to correct the lack of oversight were presented to policy makers. Even now, though DFA requires some investment advisors to register with the SEC, there are a multitude of exemptions (Berson and Berson 2012). According to SIG-TARP (2012), perhaps the largest financial/nonfinancial institution at the center of the crisis, AIG, will soon ("once again") be subject to no financial regulator "over the financial business, which continues" (p. 6) (i.e., issuing CDS). At the same time, AIG has been notified that "it is under consideration" for designation as a systemically important financial institution – the "too big to fail" stamp of approval for everything they do.

3. Discussion

3.1. The four policies and five tasks are theoretically sound

The four policies demonstrated by BCL through the World Bank survey data have been demonstrated to be more important for economic growth and financial stability than legal tradition, ethnic diversity or media openness, which were previously believed to exert strong influences. Furthermore, strong regulation and supervision alone cannot mitigate the moral hazard produced by violating any of the four policies of holding financial market participants accountable while protecting investors, limiting government control over economic assets to remove opportunities for profitable corruption, empowering the private sector to monitor financial market participants and then allowing banks – in an efficient, competitive market – to manage their businesses prudently.

Likewise, we must ensure that financial regulators attend to the policy functions that drive effective regulation by authorizing participation in financial products, assuring the disclosure of accurate, standardized information, monitoring the adherence of financial participants to rules of good behavior (surveillance and enforcement) and keeping policies up to date with developments in financial products. We cannot expect things to change if the US continues to use "a patchwork response to crises rather than [a] rational response to the international development of system risk" (Eatwell 2001, p. 17). DFA was passed before the Financial Crisis Inquiry Commission (FCIC) completed their investigation and reported on what happened and how it happened. Eatwell emphasizes the co-evolutionary development of "theory and policy that link microeconomic risk-taking to the macroeconomic propagation of systems risk."

With this last point, Eatwell unintentionally provides the key reason for not creating new theories and for continue to work on aligning policy with sound theory. To realize the potential for economic gains from specialization, new policies must shift the focus, for example, away from limiting or expanding the specific instruments that financial institutions can invest in, and toward focusing the factors that make domestic implementation of financial reform different from cross-border (Trimbath 2004). That each country is so different on each of these points may, in fact, prohibit complete alignment of global financial regulations.

3.2. Specialization: The Way Forward

The question of jurisdiction, as noted by Eatwell (2001) is critical to success: "the domain of the regulator should be the same as the domain of the market that is regulated." In the financial crisis in the fall of 1998, for example, emerging market economies "seriously threatened the financial stability of the West" (Eatwell 2001). In the financial crisis in the fall of 2008, it was the West that brought the threat upon itself. Eatwell and Taylor (1998) argue that for regulation to be efficient the domain of the regulator should be the same as the domain of the market that is regulated. In the context of what we know about the policies and tasks that support stability, only one additional factor needs to be considered, and that is an old theory on the economic gains from specialization. In The Wealth of Nations (Chapter 3), Adam Smith told us that the bigger the market the greater the potential gains from specialization. With equity markets alone reaching a global value of $46 trillion, the potential gains are enormous. If, for example, limiting a bank's ability to deal in stocks makes sense for the domestic market, in the global market it is not just "a good idea" it is quite possibly a prudent, necessary pre-requisite for stable gains.

Peter Drucker (1993) also makes this point on specialization. While “diversification” is good for a portfolio of financial investments, in large systems it means “splintering.” Diversification “destroys the performance capacity” of any system. Financial institutions are tools to be used in furthering the efforts of the broad economy. Drucker writes, “As with any tool, the more specialized its given task, the greater its performance capacity.”

4. Conclusion

Quite possibly to our detriment, the rise of the financial sector has been tied to economic expansion throughout our modern business history. The more robust the flow of finance in capital markets, the more robust is the potential for economic activity. Greater efficiency in capital markets can lead directly to greater efficiency in industry (Trimbath 2002). Our economy, our livelihood and our well-being are inextricably related to finance at home and around the world.

We do not pretend in this report to explain the crisis, nor do we believe that these and only these missing policies were to blame – on this there can be no agreement. The Financial Crisis Inquiry Commission (FCIC) reviewed “millions of pages of documents, interviewed more than 700 witnesses, and held 19 days of public hearings” across the country. Four of the ten Commissioners on the FCIC dissented from the findings in the final report (FCIC 2011), writing two separate dissenting opinions – even the dissenters couldn’t agree on why it happened.

None of this is to say that long-term failure is guaranteed for the US financial system or for global capital markets. What it says is that the pieces have been in place for a long time that allowed the failure to occur. What follows will be an experiment on a grand scale which may add significantly to our knowledge of what works in financial system development and its impact on economic growth and prosperity. Though BCL warn us that not even strong regulation and supervision could mitigate the moral hazard produced by violating the four policies, strong regulation and supervision were lacking in the US as the financial market collapse approached (FCIC 2011). The majority opinion of the FCIC concluded: “The captains of finance and the public stewards of our financial system ignored warnings and failed to question, understand, and manage evolving risks within a system essential to the well-being of the American public.”

In conclusion, we disagree with Allen and Carletti (2011) that the most recent global financial crisis is an opportunity for developing new theories and new regulations. It is now necessary to return to the basics and recognize the long run value of economically efficient specialization. We are living in the post-capitalist society described by Drucker (1993). BCL concluded that “excessive emphasis on direct official government oversight of and restrictions on banks” are associated with reduced banking-system success. US regulators may have been overly focused on the financial theory of portfolio diversification, ignoring the economic importance of comparative advantage and gains through specialization. Drucker’s post-capitalist society has arrived and financiers – specifically financial regulators – need to catch up to it by specializing. Drucker’s forecast was accurate: “Organizations can only do damage to themselves and to society if they tackle tasks that are beyond their specialized competence.”

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