# Managerial and Supervisory Mistakes Leading to Foreseeable Consequence: Global Financial Crisis

# Niyazi KURNAZ

Dumlupinar University- School of Applied Sciences
Department of Accounting, Central Campus / Kütahya, Turkey
<a href="mailto:nkurnaz@dumlupinar.edu.tr">nkurnaz@dumlupinar.edu.tr</a>

#### Hanife TOPAL

Instructor, Dumlupinar University-Tavşanlı Vocational Higher School Tavşanlı / Kütahya/Turkey hanifetopal@dumlupinar.edu.tr

### Mustafa KAYIK

Instructor, Dumlupinar University-Tavşanlı Vocational Higher School Tavşanlı / Kütahya/Turkey mkayik@gmail.com

#### Harika ÖZKAN

Instructor, Dumlupinar University-Tavşanlı Vocational Higher School
Tavşanlı / Kütahya/Turkey
harika ozkan@hotmail.com

**Abstract:** The global financial crisis that began in summer 2007, deepened in 2008 and looks set to run for some time and to have profound effects on the global economy.

For the 2007 subprime crisis, we consider that there are also some particular aspects which characterize the actual crisis, like the increased role of financial innovations (the securitization and credit derivatives) and a very important contagion phenomenon which began within the American economy and spread over the global financial markets.

The subprime crisis extended at international level, following four main directions: at the root of the crisis lies a fundamental inconsistency between financial globalization – the process of liberalization and deregulation driving the impressive growth of world financial markets – and existing public rules and policies at both domestic and international levels. On the other hand; complex corporate structures managing financial innovation causing excessive risk taking and excessive leverage due to lack of adequate supervision enhanced the global disease.

In this paper after discussing the causes of the global financial crisis, we will put forward ways and policies to overcome the ongoing crisis in global level.

**Keywords:** Global financial crisis, financial innovation, financial deregulation, financial liberalization, corporate governance

# Introduction

We have heard the footsteps of coming financial crisis in 2007. The crisis was the consequence of complex interactions between a range of factors. The development of the crisis is quite aptly put in The Economist of April 3rd 2008: First there was disbelief and denial. Then fear. Now comes anger... (Eijffinger, 2008) The anger is of course caused by the failure of financial supervision, which will be scrutinized in detail further in this paper. The onset of the crisis in 2007 followed an extended period of unusually low real interest rates, easy credit conditions, low volatility in financial markets and widespread increases in asset prices that had generated large-scale but hidden vulnerabilities. When these vulnerabilities crystallised in the wake of repeated series of asset write-downs, key financial markets became dysfunctional and the solvency of large parts of the global banking system was challenged

(BIS, 79<sup>th</sup> Annual Report, 2009). In 2007 the depressed period has began in a local mortgage segment in financial markets in the US but it spread all over the world in surprisingly short period of time causing general economic recessions in developed nations as well as developing countries. The proximate cause of the crisis is reasonably well understood. It began with the subprime mortgage crisis in the U.S. Sub-prime lending, that is, mortgages given to borrowers who do not meet the credit standard cut-off for government-sponsored enterprises, rose steadily from just below \$100 billion in 1996 to around \$600 billion in 2006. In 2006, sub-prime lending constituted a whopping 22% of all mortgages issued in the U.S. As was to be expected, this resulted in a rise in the default rates among home loan borrowers, first noted in February 2007 and fully evident by August that year. As this happened and more homes came on the market, prices of homes began to fall. From mid-2006 to mid-2008 house prices in the U.S. fell at the rate of 10% per annum. This in turn meant that lending banks and financial institutions found their asset position weakening, since the values of the foreclosed homes were now less than when the mortgages were signed. Soon these institutions were, in turn, defaulting on their loans. As this fear spread, inter-bank and inter-corporate lending came to a virtual standstill (Basu, 2009, p. 3). This argument may be seen acceptable for most of the people but we should understand how a problematic that occurs in a small part of the market pushes the world's financial markets into a vicious circle.

The shock on the American real estate market has been a starting point for the financial turbulences at international scale. At the end of 2006, an important number of clues have already announced the international financial markets crisis: depreciation of dollar denominated assets, degradation of banks financial indicators, reserves reduction and mortgage credit problems. Between 1997 and 2006, the houses prices increased with about 124% in the United States. The financial turbulences have begun before the subprime crisis. A first contagion phenomenon related to stock prices drop was signaled in emerging markets in May 2006. A second event of financial turbulences was represented by the Chinese capital market disorder in February 2007. The credit mortgage crisis in the United Stated followed (Albulescu, 2008).

This financial crisis which began in industrialized countries quickly spread to emerging market and developing economies. Investors pulled capital from countries, even those with small levels of perceived risk, and caused values of stocks and domestic currencies to plunge. Also, slumping exports and commodity prices have added to the woes and pushed economies world wide either into recession or into a period of slower economic growth (Nanto, 2009). And yet many vulnerabilities were manifest from 2004-2006 in the UK and USA in ways that clearly showed inter-connections (Gills, 2008; Pettifor, 2006). Absolute levels of debt were rising and leverage levels were rising making debt servicing more interest rate sensitive. House prices were rising faster than incomes. The expansionary business models of some banks were increasingly dependent on the renewal of short term debt in wholesale markets. Investment banks and treasury arms of commercial banks were increasingly engaging in proprietary trading. Their role as prime brokers was expanding intra-financial multiplication and fuelling further securitisation and the creation of structured credit products. Speculative investment through other derivatives that were originally intended as insurance (credit default swaps, blended foreign exchange futures etc.) was creating a highly unstable asset class. These were all issues that made tenable the notion that the ongoing dynamics of the financial system were leading to collective qualitative changes. (Morgan, 2009) In summary, there are three basic and important specifications of the crisis. The first and the second reason point out excessive risk-taking and excessive leverage by financial institutions. These reflected an inconsistency between globalization and market governance that created the possibility of originating and trading assets under massive underestimation of their risk characteristics. It is the third feature however that sharply differentiates this from previous crises: the extreme level of opacity regarding the size and incidence of risks in the portfolios held by investors and intermediaries (EEAG Report, 2009).

Several layers of securitization of loans and mortgages resulted in a loss of information and created network externalities across interconnected institutions, which made intermediaries and investors increasingly unable to assess how much risk was in their portfolio, eventually causing the illiquidity of markets directly or indirectly exposed to asset backed securities.( EEAG Report, 2009)

From another point of view, the belief that markets tend towards equilibrium is directly responsible for the current turmoil; it encouraged the regulators to abandon their responsibility and rely on the market mechanism to correct its own excesses. The idea that prices, although they may take random walks, tend to revert to the mean served as the guiding principle for the synthetic financial instruments and investment practices which are currently unraveling (Soros, 2008, p.97). In addition, Soros argued that the actual source of the current crisis is the asymmetric structure of financial internationalization and financial liberalization.

In this article, we will review the origins of the current global financial crisis. Within this framework it reviews recent developments in global financial atmosphere causing distortion and distrust in financial environment worldwide. In what follows, we therefore attempt to locate the origins of the crisis through two main grouping of

axis: first financial liberalization, competition, excessive risk taking and excessive leverage and second financial innovation, complex corporate structures and lack of adequate supervision.

# Financial Liberalization, Competition, Excessive Risk Taking and Excessive Leverage

It is not surprising that analysts and observers of the financial markets have brought Minsky's ideas back from an almost total intellectual exile. The conditions that caused and then helped to develop the current financial crisis in the USA correspond very neatly to Minsky's model of financial crises. This cyclical pattern is the endogenous nature of agents' risk perception and expectations. The Minskyan cycle can be described as follows. The tranquillity of states of full-employment gradually leads to a diminishing perception of risks and increasingly optimistic expectations about the future. It is also during periods of tranquil expansion that 'profit-seeking financial institutions invent and reinvent 'new' forms of money, substitutes for money in portfolios, and financing techniques for various types of activity'. As financial innovation and optimistic expectations develop, additional demand for goods and assets is created. Asset prices increase, giving rise to additional profit opportunities and thus attracting new investors. This positive feedback characterises the booming phase of the cycle, in which the greater appetite for risk and new financial instruments make the system increasingly fragile. At some point, some event calls agents' attention to the high degree of exposure to risk in the system and a phase of financial distress begins (Minsky, 1986, p.199)

In its Annual Report for 2006–7 released in June 2007 (technically not an Financial Stability Report, but covering financial stability concerns as part of its remit), the BIS noted that an "ever increasing number of economic and financial variables have been observed to deviate significantly from what might be deemed traditional norms" which might not be sustainable. They highlighted that the world seems "awash with liquidity" with mortgage credit available on unprecedented terms. Low risk free rates and intense competition were seen as underlying a high appetite for risk, but also the misperception of risk due to lack of due diligence in the originate and distribute model – related in turn to principal-agent problems. Concerns were expressed about "irrational exuberance" and risk of overpricing assets, that might turn to undershooting of prices, if liquidity dries up and correlations of asset prices rise as has been seen "many times in the past" (Davis, Karim, 2008).

As stated very precisely by Jack Boorman (2009), these trends were further complicated by an increasingly integrated global trading and financial system which magnified and accelerated the transmission process; inadequate regulation and supervision of national financial systems and fragmentation of global regulation; weak surveillance by the IMF and other multilateral organisations; and aggravated by weak and uncoordinated policy responses to the initial signs of trouble in the financial system—responses that, as noted subsequently, in many instances did more to shake confidence than to instill a sense that policy was up to the task of dealing with the banking system crisis and the impact on the real economy (Boorman, 2009).

Simultaneously, now powerful financial interests pushed for the deregulation and liberalization of world financial markets. This resulted in intensified financial competition over increased household and firm demand for credit that, in turn, fed a wave of financial innovation (from junk bonds, securitization, collateralized debt obligations to credit default swaps). In Minskian fashion, these developments allowed under-consumption to be temporarily averted and furthered over-investment tendencies that spread to developing economies. Continued macroeconomic growth became dependent on a financially fragile debt structure and on consumption propped up by wealth effects induced by asset bubbles. The bubbles were internally generated by increases in endogenous credit facilitated by financial innovation. These bubbles were allowed to persist by competition-induced decreases in inflation that allowed monetary authorities to pursue lower interest rate policies (Goldstein, 2009).

Minsky (1987) was one of the few commentators who understood the true potential of securitization. In principle, all mortgages (indeed, most bank assets) could be packaged into a variety of risk classes, with differential pricing to cover risk. Investors could choose the desired risk-return trade-off. Financial institutions would earn fee income for loan origination, for assessing risk, and for servicing the mortgages. Wall Street would place the collateralized debt obligations (CDOs), slicing and dicing to suit the needs of investors. Securitization contributed to an apparent democratization of access to credit as homeownership rates rose to record levels over the coming decades—and it initially appeared that banks and thrifts were insulated from interest rate risk. Minsky (1987) argued that securitization reflected two additional developments. First, it was part and parcel of the globalization of finance, as securitization creates assets freed from national boundaries. As Minsky was fond of pointing out, the unparalleled post-WWII depression-free expansion in the developed world (and even in much of the developing world) has created a global pool of managed money seeking returns.

Packaged securities were appealing for global investors trying to achieve the desired proportion of dollardenominated assets. It would be no surprise to Minsky to find that the value of securitized American mortgages

eventually exceeded the value of the global market for federal government debt. The second development is the relative decline of the importance of banks in favor of "markets." (The bank share of all financial assets fell from around 50% in the 1950s to around 25% in the 1990s.) This was encouraged by the experiment in Monetarism (that decimated the regulated portion of the sector in favor of the relatively unregulated "markets"), but it was also by continual erosion of the portion of the financial sphere that had been allocated by rules, regulations, and tradition to banks. The growth of competition on both sides of banking business—checkable deposits at nonblank financial institutions that could pay market interest rates; and rise of the commercial paper market that allowed firms to bypass commercial banks—squeezed the profitability of banking. Minsky (1987) observed that banks appear to require a spread of about 450 basis points between interest rates earned on assets less that paid on liabilities. This covers the normal rate of return on capital, plus the required reserve "tax" imposed on banks (reserves are non-earning assets), and the costs of servicing customers. By contrast, financial markets can operate with much lower spreads precisely because they are exempt from required reserve ratios, regulated capital requirements, and much of the costs of relationship banking. To restore profitability in the aftermath of Monetarism, banks and thrifts would earn fee income for loan origination, but by moving the mortgages off their books they could escape reserve and capital requirements. Investment banks purchased and pooled mortgages, then sold securities to investors. As Minsky (1987) argued, investment banks would pay ratings agencies to bless the securities, and hire economists to develop models to demonstrate that interest earnings would more than compensate for risks. Risk raters and economic modelers essentially served as credit enhancers, certifying that prospective defaults on subprimes would be little different from those on conventional mortgages—so that the subprime-backed securities could receive the investment-grade rating required by insurance and pension funds. Later, other "credit enhancements" were added to the securities, such as large penalties for early payment and buy-back guarantees in the event of capital losses due to unexpectedly high delinquencies and foreclosures—the latter became important when the crisis hit because the risks came right back to banks due to the guarantees.

But an additional advantage to the banks of all this lay in the regulatory arbitrage that the collateralised debt obligations provided. Banks were able to expand leverage [the relationship of their assets (the amount lent out) to their equity or capital] in ways that were previously impossible. This expansion of leverage was a significant factor in allowing the investment banks and others to achieve greater pricing power in their trading activities, underpinning their bubble-inducing activities. Clearly, any holding of capital is costly to the banks in the sense that it cannot be lent out at an interest. Yet over the recent past the creation of asset-backed securities of the form discussed above allowed the banks to increase their leverage substantially (Lawson, 2009).

Commercial banks appeared to be adequately capitalised, but only because they overestimated the value of on-balance-sheet assets while holding a high percentage of their most vulnerable assets hidden off-balance-sheet. In fact, they were excessively leveraged, as the crisis revealed. Many European banks had leverage ratios of 50 or more before the crisis (Crotty, 2009)

One particular dimension of the housing bubble were the subprime loans which were repackaged by the finance sector as particular mortgage-backed securities (MBS) and collaterized debt obligations (CDOs)—ostensibly to better manage risk. Thus excess liquidity was channelled both directly into the purchase of increasingly complex financial instruments (including derivative products) and indirectly by allowing the funding of subprime mortgages which were then repackaged as MBSs and CDOs. When the housing bubble burst it became apparent that the value of MBSs and CDOs had not been accurately reflected on banks' balance sheets. Financial instruments had become so complicated that where risk lies had become obscured. When the subprime mortgage market collapsed there was widespread contagion into the global financial system as a whole, as a result of the global distribution of the complex financial instruments and derivative products amongst the globally interconnected financial firms. The 'toxic' combination of an asset price bubble and the way the risks were passed on into the system has been key to making these financial instruments into such financial weapons of mass destruction (O'Brien, Keith, 2009).

When losses on subprimes began to exceed expectations based on historical experience, prices of securities began to fall. Problems spread to other markets, including money market mutual funds and commercial paper markets, and banks became reluctant to lend even for short periods. With big leverage ratios, money managers faced huge losses greatly exceeding their capital, and began to de-leverage by selling, putting more downward pressure on prices. As the subprime market unraveled, fears spread to other asset-backed securities, including commercial real estate loans, and to other bond markets such as that for municipal bonds. Markets recognized that there were systemic problems with the credit ratings assigned by the credit ratings agencies. Further, they realized that if mortgage-backed securities, other asset-backed securities, and muni bonds are riskier than previously believed, then the insurers will have greater than expected losses. Ratings agencies downgraded the credit ratings of the insurers. As the financial position of insurers was questioned, the insurance that guaranteed the assets became worthless—so the

ratings on bonds and securities were downgraded. In many cases, investment banks had a piece of this action, holding the worst of the securities, and they had promised to take back mortgages or had positions in the insurers—in retrospect, a huge mistake. (Wray, 2009)

# Financial Innovation, Complex Corporate Structures and Lack of Adequate Supervision

Although the visible start of the global financial crises emerged from US subprime market, its deep cause on the financial side is to be found in the flawed institutions and practices of the current financial regime, often referred to as the New Financial Architecture (NFA). 'New Financial Architecture' refers to the integration of modern day financial markets with the era's light government regulation. The NFA is based on light regulation of commercial banks, even lighter regulation of investment banks and little, if any, regulation of the 'shadow banking system'—hedge and private equity funds and bank-created Special Investment Vehicles (SIVs). Support for lax regulation was reinforced by the central claim of neoclassical financial economics that capital markets price securities correctly with respect to expected risk and return. Reregulation of financial markets will not be effective unless it substantially reduces the perverse incentives that pervade the system. Financial innovation has proceeded to the point where important structured financial products are so complex that they are inherently non-transparent. They cannot be priced correctly, are not sold on markets and are illiquid. According to the Securities Industry and Financial Markets Association (SIFMA), there was \$7.4 trillion worth of Mortgage Backed Securities (MBSs) outstanding in the first quarter of 2008, more than double the amount outstanding in 2001. Over \$500 billion dollars in Colletarized Debt Obligation (CDOs)<sup>1</sup> were issued in both 2006 and 2007, up from \$157 billion as recently as 2004 (SIFMA website). The explosion of these securities created large profits at giant financial institutions, but also destroyed the transparency necessary for any semblance of market efficiency. Deregulation allowed financial conglomerates to become so large and complex that neither insiders nor outsiders could accurately evaluate their risk. The Bank for International Settlement told national regulators to allow banks to evaluate their own risk-and thus set their own capital requirements—through a statistical exercise based on historical data called Value at Risk (VAR). Government officials thus ceded to banks, as they had to ratings agencies, crucial aspects of regulatory power (Crotty, 2009)

The surge in non-prime mortgage loans was spurred by the confidence of originating banks in their ability to measure default risk accurately by employing standard quantitative models. The risk associated with these underlying securities was subsequently transferred to market investors in the form of residential mortgage-backed securities (RMBS) and their common derivatives such as collateralized debt obligations (CDOs). These complex financial instruments have been differentiated by their riskiness and sold to market investors. They have allowed investors to choose assets with a precise risk profile (Orlowski, 2008, p.11).

But the most important factors which contributed to the crisis appearance were the financial innovations (represented by the securitization activity and the credit derivatives), combined with the imperfections of the regulatory and surveillance activities (Albulescu, 2008).

Leverage can therefore constitute an effective long-term strategy to increase the value of a portfolio, since it basically entails getting loans with the hope that investment returns will be higher than borrowing costs. But if the economic return on investment is lower than borrowing costs, leverage becomes harmful. It then creates a snowball effect on the balance sheet. In the final analysis and simply put, leveraging is a risk transfer instrument; it is a sword of Damocles with the potential to hurt the risk-taking firm. In the event of bad investment, corporate equity, which normally acts like a safety feature for most firms, becomes useless. In such situations, the only way out is either a buyout by another firm in better financial standing or government intervention or bankruptcy. When used excessively, leveraging can threaten, via domino effect, the stability of a whole sector or industry. That is what happened on Wall Street in September 2008 when Lehman Brothers went bankrupt. Many investors had engaged in leveraging with the goal of boosting rapidly the growth rate of their portfolios. The inaction of regulation agencies and independent rating agencies—that had yielded to the illusions of the effectiveness of monetary policy—

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<sup>&</sup>lt;sup>1</sup> In their abbreviated definition, CDOs are structured credit products backed by pools of other assets, with cash flows assigned to varying credit risk tranches: senior AAA-rated, mezzanine AA to BB- rated, and equity (unrated) tranche. Cash flows are going first to the lowest risk tranche. In Exchange for purchasing CDOs, third-party investors receive a claim on the mortgage asset and related cash flows, which becomes collateral in the case of default. Forms of CDOs include: a cash flow CDO where underlying credit risks are bonds or loans held by the issuer, a synthetic CDO with the exposure to risk insured by the credit default swap (CDS), and CDOs-squared where each underlying risk is itself a CDO tranche.

encouraged the spectacular development of new, complex and minimally regulated financial products. The intensive recourse to increasingly sophisticated innovations as well as the dissemination of financial instruments which with time became incomprehensible to users – including workers of the regulation and rating agencies - cost the international financial system what was supposed to be its most important or precious asset: transparency (Monga, 2009, p.13).

Looking at the causes of the global crisis from supervisory and regulatory perspectives, The Basel Committee itself has already indicated, through its Chairman Nout Wellink, that a thorough revision of the risk management and capital adequacy regulations is needed. The Basel committee already proposed raising capital requirements for complex structured credit products, liquidity facilities to support asset-backed commercial paper conduits and credit exposures held due to trading. Additionally, the committee said that standards for liquidity management needed to be strengthened. Another problem about the causes of the crisis is the procyclicality of the capital requirements, which has to be addressed by the Basel Committee. It is evident that the capital requirements should become more anti-cyclical. The risk management models based on Basel II have not passed the stress test of the credit crisis. This was to be expected, as ex post risk (certainly in times of crisis) is not a good proxy for ex ante uncertainty. Several researchers have additionally proposed improvements for risk management and capital planning to make banks more resilient to crises. It has become clear that national central banks and financial supervisors have to be much more involved with risk management in financial institutions. We have seen that CEOs do not understand the risk management models and aim for higher yields and the risks connected to those yields. Regulators have to provide incentives for banks to take into account risks better when searching for higher yields. This does not necessarily have to come from more strict supervision.

Because of their strategic interaction with financial institutions, supervisors should use modern game-theoretic concepts like constructive ambiguity and incentive compatibility to realise smarter and more efficient supervision. The credit crisis has showed us that the American system of financial supervision has failed and that the European supervision of banks and insurers also needs significant improvement (Eijffinger, 2008).

At the most basic level, the subprime crisis resulted from the tendency of financial normalization and innovation to run ahead of financial regulation. For a long time, deregulation was the order of the day not only outside but also within financial markets, as illustrated by, for example, eliminating the Glass-Steagall Act's<sup>2</sup> restrictions on mixing investment and commercial banking. However, considering what had happened, the problem was that other (regulatory) policies were not adapted to the new environment (Schneider, Kirchgässner, 2009)

In the developed world there has been a long-term transition away from relatively tightly regulated banking toward "market-based" financial institutions. This transformation is most clear in the U.S., which had separated commercial banking (loans and deposits) from investment banking (broader array of financial instruments including equities and securities). Two decades ago there was a lot of discussion of the benefits of the "universal banking" model adopted abroad (Germany, Japan), and there was some movement in the U.S. in that direction. However, of far greater importance was the development of the "originate to distribute" model best represented by securitization, and use of "off-balance sheet" operations. Ironically, the push to increase safety and soundness through creation of international standards as adopted in the Basle agreements actually encouraged these developments—which as we now know greatly increased systemic risk.

The failure of private parties to exercise sufficient due diligence was rooted in the failure of government supervisors to challenge decisions made by private accountants and credit-rating organizations. Authorities neglected their duty of examining and publicizing the implications that these decisions might have for safety-net loss exposure. By tolerating a decline in transparency, supervisors made it difficult to recognize and price the risk expansion not only for themselves, but also for the market participants (Caprio, Demirgüç-Kunt and Kane, 2008).

The current crisis just as convincingly represents a failure of the Big Government/Neoconservative (or, outside the U.S., what is called neo-liberal) model that promotes deregulation, reduced supervision and oversight, privatization, and consolidation of market power. It replaced the New Deal reforms with self-supervision of markets, with greater reliance on "personal responsibility" as safety nets were shredded, and with monetary and fiscal policy

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<sup>&</sup>lt;sup>2</sup> The Banking Act of 1933 was a law that established the Federal Deposit Insurance Corporation (FDIC) in the United States and introduced banking reforms, some of which were designed to control speculation<sup>[1]</sup>. It is most commonly known as the Glass–Steagall Act, after its legislative sponsors, Carter Glass and Henry B. Steagall. The first Glass-Steagall Act of 1932 was enacted in an effort to stop deflation, and expanded the Federal Reserve's ability to offer rediscounts on more types of assets, such as government bonds as well as commercial paper<sup>[4]</sup>. The second Glass–Steagall Act (the Banking Act of 1933) was a reaction to the collapse of a large portion of the American commercial banking system in early 1933. It introduced the separation of bank types according to their business (commercial and investment banking), and it founded the Federal Deposit Insurance Corporation for insuring bank deposits. Literature in economics usually refers to this latter act simply as the Glass–Steagall Act, since it had a stronger impact on US banking regulation. (www.wikipedia.org)

that is biased against maintenance of full employment and adequate growth to generate rising living standards for most Americans (Wray, 2009).

One important implication of the recent crisis is the wide-spread calls for reforms of regulation and supervision. The initial reaction to the emerging crisis was one of disbelief: how could the crisis emerge in countries whose supervision of credit risk had been thought to be the best in the world? Indeed, the regulatory standards and protocols of these countries were in the process of being emulated worldwide through the international Basel capital accords. Basel II - which is currently in its implementation stage - grew out of concern that the Basel I accord was unable to address the range of risks in bank activities, as evidenced by the growth of securitization. Basel II is built on three Pillars: (1) minimum regulatory capital requirements for credit risk, operational risk and market risk; (2) the supervisory review process; and (3) market discipline and disclosure. The minimum capital requirements are determined by either external ratings from ratings agencies for smaller banks or by outputs from the larger banks' own internal ratings models. Many interpreted the crisis as a vivid example of market failure, evidence that there is no such thing as market discipline, reinforcing calls for stronger regulations through improvements in Basel II accord. But the crisis also spawned a growing argument about the role Basel I accord may have played in causing the crisis. Indeed, it is no secret that Basel I contributed to the growth in securitization by assigning lower capital charges and thus giving incentives to institutions to move their assets into off balance- sheet securitization vehicles. While advocates claimed that Basel II, had it been implemented earlier, could have lessened or prevented the turmoil, critics of the Basel approach to capital regulation pointed out that the crisis has simply reconfirmed fundamental flaws that have been evident in this approach (Demirgüç-Kunt, Servén, 2009, p.25).

### Possible solutions to overcome the worldwide distress

After leaving out the first shock, countries started to search about possible ways to overcome the crisis with least damage and the least cost in the shortest period of time possible. Though fundamental precautions needs to be taken worldwide, nations and authorities have started the job by listing the lessons learned from the crisis and by putting forward relative actions according to problematic areas and issues in financial environment along with the whole economy as well.

In the United States, policy proposals to change specific regulations as well as the structure of regulation and supervision at both the domestic and international levels have been coming forth through the legislative process, from the Administration, and from recommendations by international organizations such as the IMF, Bank for International Settlements, and Financial Stability Board (Forum) (Nanto, 2009).

Though remedies prepared by countries differs according to every nation due to different focus over the problems and different national financial structures and different needs, fundamentally policies commonly aim to promote robust supervision and regulation of financial firms, establish comprehensive supervision of financial markets, protect consumers and investors from financial abuse, provide the government with the tools it needs to manage financial crises, and to raise international regulatory standards and improve international cooperation.

In addition, U.S. authorities proposed international reforms to support U.S. efforts- where policy work is the most intense as the starting point of the crisis and as the most affected country of the crisis, including strengthening the capital framework; improving oversight of global financial markets; coordinating supervision of internationally active firms; and enhancing crisis management tools.

As the crisis unfolded, governments have been forced into the role of becoming new owners of distressed financial institutions, guarantors of loans, taking over the risk implicit in poor collateral (with contingent liabilities for the taxpayer), and making regulatory adjustments on the run. With respect to crisis management there are three basic and separable steps required to deal with a banking system solvency crisis. Guarantee liabilities to stop bank runs. All deposits need to be covered to avoid creating runs between covered and noncovered institutions. Secondly, separate the good assets from the bad assets, and get the bad assets off bank balance sheets. One approach to this is like the Troubled Asset Relief Program (TARP) program in its initial form: essentially an 'asset management' approach to buying toxic assets (as was used during the Asia crisis). Thirdly, recapitalize the asset-cleansed banks by finding new equity holders. This can be via selling common shares or preference shares (that provide a higher yield to the owner) to private entities or the government. The latter is not desirable in the longer run, as it can contribute to moral hazard issues and level playing field issues. As the crisis passes, it will be important to focus on sustainable policies for the financial system (Blundell-Wignall, Atkinson and Lee, 2008).

Most important, according to Ergungor and Thomson, is that successful crisis resolutions have been characterized by *transparency*. When officials move to contain a financial crisis, their primary task is to identify which institutions are viable and which assets are good, and conversely which institutions are insolvent and which assets are bad. This triage and full disclosure of associated losses clears the uncertainty surrounding the

financial institutions and makes it possible for the viable institutions to raise new funds from private investors or from the government if private sources are not available. Second, crisis resolutions have been most successful when they were handled by a politically and financially independent agency. Granting independence to those responsible for containing the crisis and restructuring shields decision makers from political pressures, which mount as institutions are closed and assets are liquidated. The decision to close a financial institution or a business must be an economic, not a political, one. Financial independence is necessary to give credibility to political independence: If a government agency holds the purse strings, it can dictate policy. Independence from changing political environments is also important because it allows for a rapid response to emergent funding needs (as when new losses are discovered in a financial institution). Having to wait for the legislature to appropriate funds in these situations can be impractical. A third practice associated with a successful resolution strategy is the maintenance of market discipline. Without it, note Ergungor and Thomson, the stage is set for future crises. If market discipline is to be effective, investors who assumed greater risks must be credibly exposed to loss; that is, they must suffer the consequences of having ignored or failed to detect signs of trouble. Finally, Ergungor and Thomson observe that containing troubled financial assets and restructuring institutions has typically not been enough to resolve a financial crisis entirely, though doing so positions the system to return to more normal functioning. They find that full crisis resolution must also achieve some restoration of credit flows within the economy. For that to happen, the creditworthiness of borrowers must be restored throughout the economy—a difficult task, given that the economic fallout from a crisis (such as rising unemployment) actually erodes credit quality further. (Ergungor, 2007; Ergungor and Thomson, 2005; Ergungor and Cherny, 2009)

# Conclusion

The subprime mortgage crisis that erupted in the American financial markets in August 2007 caused an unprecedented global recession and generated various and urgent policy responses around the world. It was seen as an opportunity for some communist economists to announce the end of the dominance of free market economy. It was, however, a matter of concern to hear some important people complain about the "betrayal of globalization"—who have by and large managed their economies much better in the past twenty years, only to be hit hard by a crisis that originated in the center of the world economy.

Financial crises often do expose weaknesses in the underlying incentive frameworks and the regulation and supervision systems that are supposed to reinforce them. But finance is risky business and it is naïve to think that regulation and supervision can – or should- completely eliminate the risk of crises, although they can make crises less frequent and less costly. Neither monetary policy nor capital controls can substitute for well designed prudential regulation. Despite their inherent fragility, financial systems underpin economic development. The challenge of financial sector policies is to align private incentives with public interest without taxing or subsidizing private risk-taking. Public ownership or too aggressive regulation would simply hamper financial development and growth. But striking this balance is becoming increasingly complex in an ever more integrated and globalized financial system (Demirgüç-Kunt, Servén, 2009).

How did this second great colossal muddle arise? In the aftermath of the Great Depression, we redesigned the machine so that we did understand it, well enough at any rate to avoid big disasters. Banks, the piece of the system that malfunctioned so badly in the 1930s, were placed under tight regulation and supported by a strong safety net. Meanwhile, international movements of capital, which played a disruptive role in the 1930s, were also limited. The financial system became a little boring but much safer. Then things got interesting and dangerous again. Growing international capital flows set the stage for devastating currency crises in the 1990s and for a globalized financial crisis in 2008. The growth of the shadow banking system, without any corresponding extension of regulation, set the stage for latter-day bank runs on a massive scale. These runs involved frantic mouse clicks rather than frantic mobs outside locked bank doors, but they were no less devastating. What we're going to have to do, clearly, is relearn the lessons our grandfathers were taught by the Great Depression. I won't try to lay out the details of a new regulatory regime, but the basic principle should be clear: anything that has to be rescued during a financial crisis, because it plays an essential role in the financial mechanism, should be regulated when there isn't a crisis so that it doesn't take excessive risks. Since the 1930s commercial banks have been required to have adequate capital, hold reserves of liquid assets that can be quickly converted into cash, and limit the types of investments they make, all in return for federal guarantees when things go wrong. Now that we've seen a wide range of non-bank institutions create what amounts to a banking crisis, comparable regulation has to be extended to a much larger part of the system. We're also going to have to think hard about how to deal with financial globalization. In the aftermath of the Asian crisis of the 1990s, there were some calls for long-term restrictions on international capital flows, not just temporary controls in times of crisis. For the most part these calls were rejected in favor of a strategy of building up large foreign exchange reserves that were supposed to stave off future crises. Now it seems that this strategy didn't work. Exactly what form the next response should take isn't clear, but financial globalization has definitely turned out to be even more dangerous than we realized. (Krugman, 2009, p. 189)

The World economy faces with financial crises in certain periods. From time to time those crises become more frequent and from time to time they become seldomly occurring. But we should note that just like the severity and intension of the earthquakes increases when the earthquakes are rare, the damage and cost of the financial crises to the economy increases if it has been a long time after the last event hit the world. Following the financial turmoil of 2007-2008 of which the negative effects still continue, there have been thousands of lessons taken out of the crises. All the lectures are about the policies to overcome the crises and the measures to take in order to prevent the new ones. But since the financial products, financial institutions and financial environment changes rapidly, every new crisis comes up with an unanticipated source. So every time there remains new lessons to learn for the economy.

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