

Financial Meltdown from Atlantic to Pacific: Reaganomics or Financial Innovation?

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Abstract

Financial markets from New York to London and Tokyo are still reeling from the most severe crisis since the Great Depression of the 1930s. At the center of the crisis are complex structured credit products and innovative financial instruments which have enjoyed a boom during the deregulation era of the last ten years. Deregulation was first promoted in President Ronald Reagan's economic policy, known as "Reaganomics," in the 1980s. Since then, there has been less government oversight of the financial markets. This lack of regulatory oversight has not only been restricted only to the U.S.; markets across Europe and Asia have also enjoyed the "hay-ride" without caring about the long-term consequences. A decade of deregulation has resulted in more opaque financial markets in many respects, with lightly regulated or nearly unregulated innovative investment instruments. This paper shows that the growth of unregulated financial innovation, facilitated by reckless deregulation, has made the markets less transparent and less stable, leading to the recent financial crisis. It discovers the link between Reaganomics deregulation and the growth of financial innovation. It explains how financial innovation in the markets, without an adequate supervisory and monitoring system, led to the meltdown in global financial markets, including Asia-Pacific markets.

Keywords: deregulation, financial crisis, financial innovation, Reaganomics, structural finance

Introduction

The most recent financial crisis, spearheaded by defaults in the U.S. mortgage market in 2007, has caused widespread disruption to the global financial system. The lack of liquidity and a credit crunch in the market forced a host of uncalled-for adjustments in the financial markets around the globe. Starting with the U.S. market, it did not take long to engulf markets from Europe to Asia. Bear Stearns acquisition by JP Morgan Chase,

Lehman Brothers' filing for bankruptcy protection under Chapter Eleven, and the purchase of Merrill Lynch by the Bank of America were just the tipping point, culminating in huge bail-outs being doled out by governments around the globe. Since then, the list of affected banks and financial firms has continued to grow.

The crisis is in sharp contrast with the growth and expansion of the financial markets in the past decade, especially after the dotcom bubble burst in 2000. While US and European financial markets enjoyed unprecedented growth, the bonanza was relatively muted in East Asia, especially Japan, which had a hard time coming out of a long post-bubble recession. Japan, however, learned some of the lesson early on due to its experience in dealing with the post-bubble malaise. But it was trapped in the current crisis before it could put its house fully in order. There is an urgent need to understand the underlying forces that were responsible for all this, so that our societies are better prepared and protected in future. In the following section, we present a detailed cross-sectional diagnosis of the issue.

In general, the growth and expansion of the global financial markets has been characterized by innovative financial engineering products like asset-backed securities (ABS), collateralized debt obligations (CDO) through the securitization of mortgages, and consumer and corporate loans; and by new financial intermediation such as special purpose vehicles (SPV), structured investment vehicles (SIV), etc. Such financial innovation was welcomed by market participants, as it was believed to spread credit risks, lower financing costs, and attract fresh capital. The Securities Industry and Financial Markets Association (SIFA 2008) reported that the U.S securitization market was worth around \$10.7 trillion in 2007; most of the growth occurred in mortgage-backed securities (MBS), whose volume almost tripled between 1996 and 2007, to \$7.27 trillion.

However, financial innovation, which drove this growth, has in its own right contributed to instability and chaos in the financial markets. The balance sheets of large banks are now burdened by their holding of a large quantity of complex structured securities which have suffered large declines in value and liquidity, especially those backed by sub-prime mortgage loans. The lack of transparency in the market raised concerns among investors about credit risks and their real exposure to securities backed by sub-prime mortgages, leading to investors' withdrawal from markets. This downward spiral resulted in a lack of liquidity and a credit crunch in the market, forcing further disruption in the financial system.

Financial deregulation played a fundamental role in the rapid growth of financial innovation during the last two decades. Since deregulation was first promoted in the 1980s by President Reagan, many regulatory and supervisory regimes have been removed, necessitating market self-regulation and discipline. The abolition of the Glass-

Steagall Act and the “no requirement of permission” by the U.S. Securities and Exchange Commission (SEC) for higher leverage level in investment banks are the most poignant examples that spearheaded this barrage of financial deregulation and lack of oversight. The issue of regulating innovative instruments was raised among regulatory bodies and scholars during this time, but the hands-off approach was maintained in many sectors of the financial market, such as the derivatives market, hedge funds and off-balance-sheet entities (OBSE). These deregulations contributed to the financial euphoria of the last decade.

The relationship between the pace of financial liberalization and the growth of structural finance explains the convergence between deregulation, as part of Reaganomics, and the growth of financial innovation. It explains how financial innovation in the market, without adequate supervisory and monitoring systems, led to a meltdown in global financial markets as a consequence of unbridled financial expansion. Due to constraints of space, we shall limit the discussion here to innovative instruments that are now at the center of the current market turmoil, such as the structured credit products ABSs, CDOs, CDSs and OBSEs. It will focus the analysis of the financial crisis on the U.S. market, where almost all of these innovative financial instruments were invented and widely used. And while we trace the origins of the problems in the U.S. market, its impact – direct and indirect – upon the markets in Europe and Asia will also come into focus at times.

The consequences and lessons from this saga are far more important for Japan than for any other country, as no other single economy is so deeply connected and intertwined with the U.S.’s. It is no secret that ups and downs in the U.S. economy, short-term or long-term, impact the Japanese economy. That interconnection is also due to large-scale investment by Japanese individuals and companies in US financial and housing markets in particular and in other sectors in general. That causes the direct impact of US economic policies on Japan. It should not been seen as mere coincidence that the 1980’s bubble in Japan evolved around the same time as Reaganomics was shaping the U.S. financial landscape; Japanese markets and governments were quick to copy. Hence, it is of great importance to understand U.S. financial policies and their evolution in order to understand the likely impact they may have on economies that are connected to its performance.

The Meltdown – A Perspective

Since the sub-prime crisis broke out, serving as a precursor of the much larger global financial meltdown to follow, studies on the crisis have been mushrooming. However, most studies discuss only the superficial causes of the current financial crisis, whereas

we think the root cause of the problem goes further and deeper. In this section, we attempt to take into account the most important and relevant studies on the causes and consequences of the recent financial crisis, and we attempt to explain their insufficiency in explaining the recent financial chaos.

Because of the complexity of structured credit products and their far-reaching impact upon the global financial markets, there are diverse arguments as to the root of the crisis. However, there is a broad consensus that complex innovative financial instruments were one of its major sources. Right before the crisis, Hamilton et. al. (2007) opined that growth of financial market activities across the globe in the last decade was fuelled by rapid financial innovation, but did offer any evidence of the formal linkage mechanism. The Credit Risk Transfer report (Basel 2007) concluded that structured credit products have become more and more complex. As a result, they are hard for market participants to value. Criado and Rixtel (2008) note that such hard-to-value complex instruments led to big losses on banks' balance sheets. Brunnermeier (2008) stated that the employment of OBSE conduits and SIVs increased the opacity of financial markets. The Global Financial Stability Report (2007) explained that due to the complexity and lack of transparency of those products, financial markets around the world have become more volatile and unstable. However, those reports did not cover the growth of such financial innovation before the crisis, nor the impetus behind its growth.

Nouriel Roubini (2008) presented ten shortcomings of the financial system and its regime of regulation and supervision. He commented that the market was becoming increasing opaque due to lighter regulation and lax supervision of banking and non-banking institutions. Schacht (2008) discussed the inadequacy of the prudential regulatory framework and supervisory system. In the proposal for reforming the supervision of financial markets, U.S. Treasury Secretary Paulson (2008) also acknowledged the overlap of regulatory bodies and the inefficiency of the current regulation system. Nevertheless, there remains no full discussion of deregulation in the financial market in the last decade and its contribution to the meltdown.

The President's Working Group on Financial Markets (2008) and the Financial Stability Forum (2008) attributed the crisis to the significant erosion of market discipline. According to their analysis, there was widespread complacency about risks among investors. But the deregulations in the financial markets in the past years are not discussed sufficiently in these reports. Kregel (2008) argued that the deregulations of the financial system since the 1970s, leading to the deterioration of lending standards in mortgage lending, underpinned the turmoil in the financial market. Emilius (2008) argued that the loss aversion of investors in the sub-prime crisis led to further turmoil in the market.

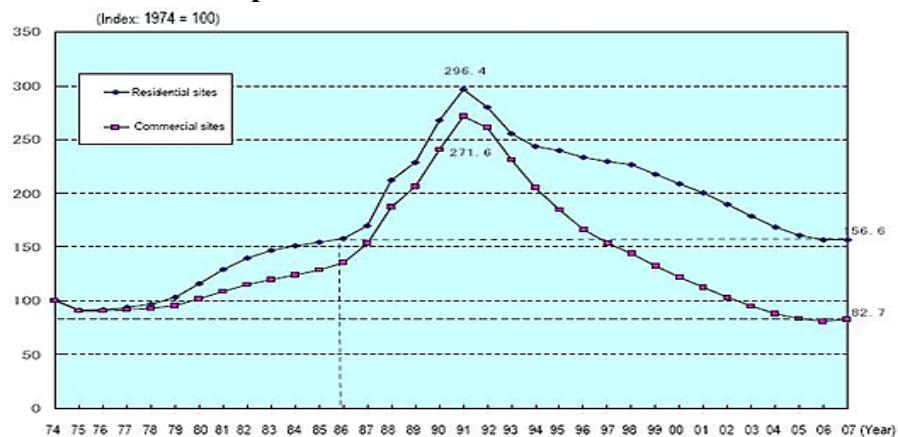
While it is evident from the above material that many people saw smoke rising

from the overheated innovative financial markets, few were able to identify the exact cause and trace it back both in technical and historical terms. So far there is a lack of discussion about the growth of financial innovation during this deregulated era, as well as its contribution towards the erosion of market discipline. We, however, see a connection between the growth of complex financial innovation and the deregulation of financial markets and the economy spearheaded by economic policies and doctrines referred to as Reaganomics. We shall attempt to answer how such innovation took root and was allowed to grow in more lightly regulated markets. Moreover, we will explain how the transformation from the traditional bank lending model to an “originate-to-distribute” (OTD) model, including the employment of financial engineering products and off-balance-sheet vehicles, led to a deterioration in lending standards and excessive leverage in the financial system.

It is obvious from the following chart how closely connected are land price trends in Japan to the era during which Reaganomics and consequent market deregulation took place in the U.S.

The case of the real-estate market is of particular relevance because most of the capital in financial markets in the U.S. or elsewhere flows through the real-estate market. Also, real-estate market finance was a major driver of most of the financial innovation taking place during this time. It is necessary for all backward and forward linkages that shaped the current times and circumstances to be discussed.

Figure 1: Land Prices in Japan 1974 - 2007



Source: Japan Ministry of Land, Infrastructure, Transport and Tourism Land Price Data

Reaganomics and the Growth of Financial Innovation

Free-market economic policies promoted by consecutive U.S. regimes provided stimulus for the growth of the largest economy in the world (*The Economist*, October 11, 2008).

In the 1980s, President Reagan called for reducing the government's role in the economy, later referred to as Reaganomics. Here we shall discuss the recent growth of financial innovation to discover the footprints of deregulation and the hands-off policy of Reaganomics in the financial market in the past ten years. This will substantiate our argument that financial innovation has its roots in Reaganomics, which later played a pivotal role in financial overplaying in the markets.

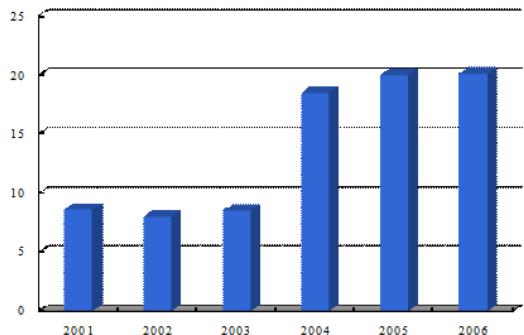
"Affordable housing" and securitization

Structured credit securities are products of the securitization process, which has served as the lynchpin of the financial markets since 1980s. Securitization allows the pooling of an individual loan with other loans. The pool of loans is then sold to a special purpose vehicle, SPV, which finances its purchase by issuing asset-backed securities (ABSs) in the market. As a result, the illiquid loans turn into securities, tradable in the financial market, allowing more capital to flow into the credit market. Securitization increases the liquidity of the original loan, lowering the credit cost and spreading the credit risk among market participants (Emilios 2007).

Because of these presumed benefits, securitization was encouraged in the U.S. mortgage market. Fannie Mae and Freddie Mac bought mortgage loans from mortgage originators and securitized them into mortgage-backed securities, MBSSs, allowing mortgage originators to have cash upfront and thus originate more mortgages. Mortgage loans bought by the two government-sponsored entities (GSEs), known as "conforming loans", are mortgages for prime borrowers, and conform to the accepted underwriting standards. However, with the 1990s policy of more home ownership in the community, the two GSEs were encouraged to buy a wider range of loans, including some "sub-prime loans", which are mainly for borrowers of weak or incomplete credit histories in the market (Randall, 2007). This gave more sub-prime borrowers the chance to borrow mortgage loans and own a house, and as a result the number of sub-prime mortgages significantly increased (see Figure 2). The number of structured credit securities backed by sub-prime mortgage loans also accelerated (see Figure 3).

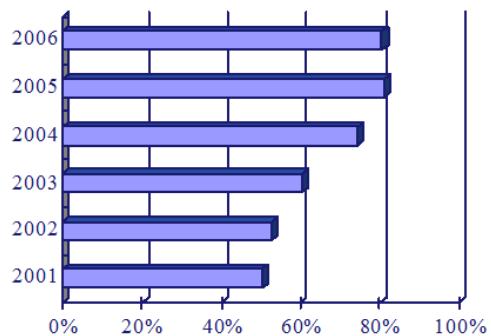
This securitization process totally changed the traditional lending model. After being originated, loans were repackaged and distributed in the market as asset-backed securities. Therefore, this model is also known as the "originate-to-distribute" (OTD) model. Under the OTD model, investment banks and other financial institutions are the main capital suppliers for the credit market, particularly in the mortgage market, through investing in those innovative investment instruments.

Figure 2: Sub-prime Share in Total Mortgage Originations



Source: Adapted from Inside Mortgage Finance (2007)

Figure 3: Percent Sub-prime Securitized

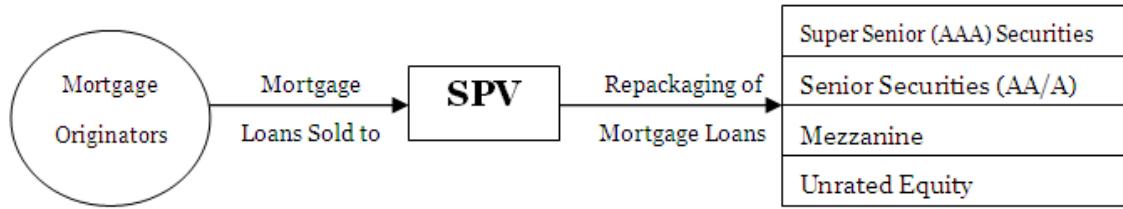


The question is why investors were willing to buy investment instruments backed by those sub-prime mortgage loans. The answer lies in the financial innovation and the hands-off approach of regulatory bodies. The use of financial innovation allowed investment banks and other financial intermediaries to change those sub-prime mortgages into investment-grade securities. As stated, such innovative instruments included off-balance-sheet entities (OBSEs) such as SPVs, SIVs, and financial conduits that grew exponentially in a lightly regulated environment.

Lightly regulated Off-Balance-Sheet Entities (OBSEs)

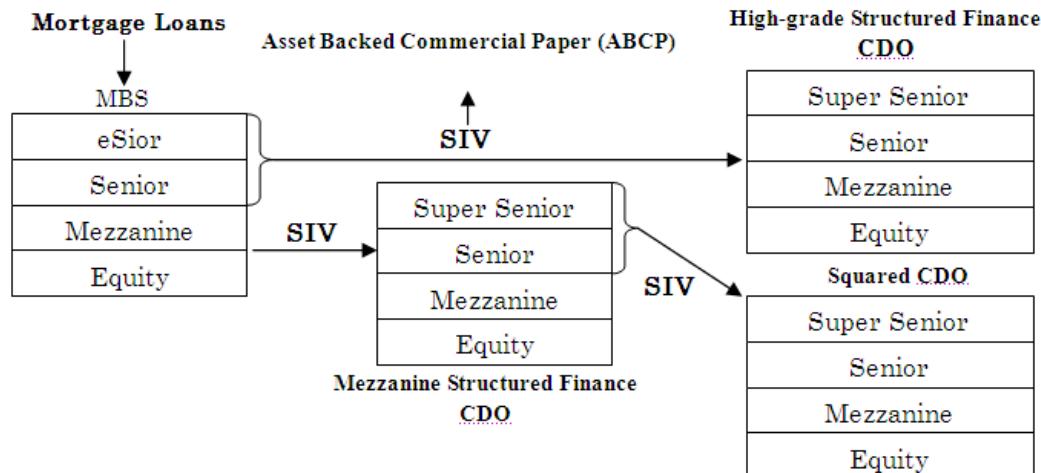
OBSEs take a variety of forms, depending on the financing method and investment portfolios. An SPV would be established by investment banks as an independent company to execute the purchase of loans from banks, as mentioned above. SPVs repackaged those loans, sliding them into tranches and issuing ABSs with different seniorities and rating quality in the market (see Figure 4). The upper tranches, known as “senior tranches”, are the safest tranches, with a priority claim on the payment of the originated loans, and receiving the highest rating. The lower tranches are more risky, and offer higher returns. A SPV removes originated loans from the balance sheets of banks, collecting principal and interest cash flows from the underlying assets and passing them on to the owners of the various tranches. Meanwhile, if banks want to invest indirectly in ABSs, they would establish SIVs to invest in senior tranches by issuing asset-backed commercial papers (ABCPs). SIVs allow the repackaging of a pool of loans to provide more complex structured credit products like CDOs, or they facilitate the re-securitization to make CDOs *squared*, as illustrated in Figure 5. As a result, the originated sub-prime mortgage loans turn into a bunch of investment-grade securities in the market through the use of innovative investment instruments.

Figure 4: SPV Securitization – Basic Design



Though established as separate entities, SPVs and SIVs required a credit-enhancement or liquidity-support commitment from a well-established banks; or financial institutions called sponsors to earn a AAA rating from credit-rating agencies. However, in the process, liquidity-support commitment exposed the sponsor bank to the liquidity risk of OBSEs. Sponsor banks made gross misuse of Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) rules, which allowed the disclosure of related OBSEs by sponsor banks to be voluntary at best (UITF 2008). The lighter regulation resulted in the increased use of OBSEs by banks to hide risks and leverage in securitization activities: they removed loans from their balance sheets and recycled capital through securitization to generate new loans. Banks would also invest indirectly in high-yielding, longer-maturity debt like ABSs without worrying about the capital-adequacy requirements. Meanwhile, banks enjoyed remarkable revenue for establishing and running those OBSEs.

Figure 5: Structural Finance: SIV



Source: Multi-Layered Structured Credit Products Adapted from IMF Global Stability Report (2008)

Lack of disclosure prevented the exact estimation of the growth of these instruments. However, according to an IMF report (2008), the recent growth of SIVs was mainly seen in mortgage products and CDOs. These assets were estimated to comprise over half of the SIV's assets. In the 10-K form (an annual filing of companies listed on the U.S stock exchanges required by the SEC) filed for the U.S. Securities and Exchange Commission (SEC) in 2007, Citigroup disclosed that it had \$774.1 billion in qualified special purpose entities (QSPEs), in which mortgages accounted for nearly 79%.

Unbridled structured credit products

Structured credit products and credit derivatives help spread credit risks among the market participants. In the conventional lending model, the lender had to assume all credit risks involved in originated loans. However, as loans are divided into tranches with different risk and return trade-offs, and sold in the market as securities, the scheme allowed different types of investors to hold different parts of the capital structure of those products. Due to the complex structure of the products, the valuation is primarily based on the credit rating and their liquidity in the market; as a result, banks faced heightened liquidity risk, and downgraded the risk of those structured credit securities even when investing in super senior tranches

Excessive liquidity and demand for innovative financial instruments

In this section we shall explain the connection between excessive liquidity in financial markets in the past years and deregulations in the market during the same period.

Low interest rate

The interest rate was maintained at a low level in U.S. after the dotcom bubble burst in 2000, and following September 11, 2001, to boost consumption in the economy. Low interest rates encouraged borrowing and lending activities in the market, resulting in more credit and liquidity being available for investment. Therefore, market participants, especially lightly-regulated but highly-leveraged hedge funds and private equity funds, sought higher-risk and higher-yield investment instruments (Michel 2007), leading to more demand for lower-tranch MBSs and CDOs.

The abolition of the Glass-Steagall Act

The Act was brought into force in the 1930s to separate commercial banking and investment banking. However, in 1999, this segmentation was abolished, allowing the creation of financial holding companies that could engage in a wider range of banking activities, including securities and insurance (James 2000). As a result, investment banks enjoyed more capital injection into the market from depository institutions (*The*

Economist, October 18, 2008). The removal significantly increased the capital and liquidity available for investment in the market.

Deregulation in the Derivatives Market

In 2000, the Commodity Futures Modernization Act (CFMA) was introduced, removing many regulatory requirements in the derivatives market. By removing regulations in the energy and commodity trading market, the CFMA encouraged greater speculative trading and higher leverage in the derivatives market.

Implied guarantees

Investment banks have been lightly regulated, with a lower capital-adequacy ratio and a higher-leverage level than other depository institutions. With the consent of the SEC in 2004 (Stephen 2008), the leverage ratio in the five biggest investment banks before the crisis was always maintained at around 35:1. The high leverage allowed investment banks to participate in risky investments with low equity requirements, earning higher profits. At the same time, these investment banks enjoyed an implied guarantee from the SEC in case of default, similar to other heavily-regulated depository institutions. The \$30 billion rescue package from the Federal Government in the case of Bear Stearns in February 2008 is one example of this implied guarantee (Nouriel 2008).

Similarly, other non-depository financial institutions benefited from innovative financial instruments in a numbers of ways, including:

- Allowing more credit to be available to borrowers (household and corporate)
- Decreasing the cost of capital in the market.
- Providing more instruments for hedging and managing risk, and
- Providing a wider selection of investment instruments.

Financial Innovation and Financial Market Turmoil

A closer reading of the report of the President's Working Group on Financial Market (PWG 2008) shows that the sub-prime crisis is symptomatic of much broader erosion of market discipline. The default of a large number of sub-prime loans in the market during 2007 was the trigger for a financial calamity that was in the making for more than a decade, caused by unregulated innovative investment instruments and shabby lending practices by financial and investment institutions. In the following sections we will explain the linkages between financial innovation and the recent financial market turmoil piece by piece.

Originate-to-distribute practices

Financial innovation without proper regulation led to the sustained erosion of market discipline, as explained earlier. This trend is traced in an earlier study, but that study falls short of explaining the mechanics of the relationship (Kregel 2008). Lax underwriting standards in the mortgage market provided an obvious example of a shabby financial model designed around the originate-to-distribute principle (OTD). The OTD model helped to spread risks and reduce financing costs for market participants. However, the transferring of the underlying assets in the OTD model led to a separation between the risk-monitor and the risk-bearer. Under the conventional lending model, commercial banks kept originated loans in their balance sheets, reflecting the credit risk in toto. Therefore, they were motivated to verify the borrower's creditworthiness and avoided risky loans. This motivation disappeared in the new OTD model, where loan originators would easily sell the originated loans to packagers and pass the risk on to other participants in the market. Moreover, loan originators were motivated by misaligned incentives, as their revenues depended not on the quality of such loans, but on the quantity (Emilios 2008). The more mortgages they originated, the more they earn. Investment banks engaged in a wide range of non-conventional practices related to the securitization process, like originating a mortgage, securitizing it, servicing the securitized structure, and providing insurance.

Adjustable-rate mortgages (ARM) also grew significantly (see Table 1). According to Kregel (2008),

... the first report of the State Foreclosure Prevention Working Group (2008) hints that weak or non-existent underwriting ... [gave rise to] loans that had no reasonable prospect of being repaid ... Many loans were originated on the basis of the borrower's declaration of income, with no verification of income, assets, or employment.

The results of reckless lending could be seen as early as 2007, when many ARM loan rates were reset to a gradually rising interest rate. According to the Global Financial Stability Report (2008), as of the third quarter of 2007, 43% of foreclosures were on sub-prime ARMs. The default rate of non-prime loans was forecast to stay around 30% till 2009 (see Table 2).

Table 1: Sub-prime Loans

	ARM Share	IO Share	Low-No-Doc Share	Debt Payments-to-Income Ratio
2001	73.8%	0.0%	28.5%	39.7%
2002	80.0%	2.3%	38.6%	40.1%
2003	80.1%	8.6%	42.8%	40.5%
2004	89.4%	27.2%	45.2%	41.2%
2005	93.3%	37.8%	50.7%	41.8%
2006	91.3%	22.8%	50.8%	42.4%

Source: Inside Mortgage Finance (2007), adapted from International Monetary Fund

These loans were given on the premise that real estate prices would keep rising and interest rates would be kept low (Kregel 2008). In other words, such loans were given on the basis of the borrowers' ability to refinance, not their capacity to pay back. During the stable era, the default rate was low; however, in the volatile era, the default rate on such sub-prime loans rapidly accelerated.

Table 2: Current Delinquency Rates for Sub-prime and Alt-A Loan

Quarter for First payment Rest	30+ Days Past Due (%)
4 th Quarter 2007	32.4%
1 st Quarter 2008	32.5%
2 nd Quarter 2008	34.2%
3 rd Quarter 2008	35.5%
4 th Quarter 2008	35.4%
1 st Quarter 2009	30.5%
2 nd Quarter 2009	22.9%
Average	31.9%

Source: Adapted from State Foreclosure Prevention Working Group (2008)

Off-Balance-Sheet Entities and risk concealing

Securitization was widely used for transferring risks. However, many banks didn't fully grasp the risks inherent in the model. As the crisis broke out, it was revealed that although banks and financial institutions had intentionally used OBSEs for transferring risks, they were still exposed to significant risks involving structured credit securities. Some banks retained super senior tranches of CDOs in their balance sheets due to the low demand for those low-risk and low-return tranches. With the onset of the sub-prime crisis, the value of those products quickly evaporated due to the illiquidity of the market.

Banks were now exposed to big losses as a result of holding even presumably safer or highly-rated tranches; at the same time, they were supposed to provide liquidity support for SIVs as committed. Investors soon started to realize the hollowness of the ABCPs, issued by SIVs and backed by RMBS and CDOs, and started to withdraw from the ABCP market in droves. As a result, ABCPs couldn't be rolled over, leading to the sudden drying-up of the ABCP market; which, in turn, brought many large U.S. and European financial institutions under liquidity pressure (PWG 2008). During the summer of 2007, Citigroup had to purchase \$25 billion in commercial paper issued by some of its SIVs. By December 2007, Citigroup bailed out six SIVs with an asset total of \$49 billion (IMF 2008). The consolidation of OBSE instruments on the sponsors' balance sheets caused greater controversy in an already volatile market, creating more confusion. And still the regulators allowed the disclosure of OBSEs on a voluntary basis (IMF 2008). Due to the lack of transparency, in the financial turmoil investors felt uncertain about the real exposure of banks to OBSEs and structured credit products, leading to their large-scale withdrawal from the market.

Lack of disclosure and valuation uncertainty

As discussed earlier, the complexity of structured credit products makes them hard to value (see Figure 5). Meanwhile, very little information on those products was disclosed in the physical market place, since most CDOs were traded over the counter. Investors mainly relied on credit ratings and the liquidity of those products to value them; as a consequence, CDOs and CLOs easily lost their value in an illiquid market.

Credit-rating agencies played an important role in the performance of structured credit products. Institutional as well as individual investors depended extensively on credit ratings for evaluating the risk in structured credit products, as these products were often too complex to be tracked otherwise (PWG 2008). However, the crisis has shown that there are great flaws in the credit-rating model used for structured credit securities. The conflict of interest between credit-rating agencies and the suppliers of ABSs and CDOs also brought into focus the controversial discussion of the quality of credit ratings. A detailed discussion of the role of credit-rating agencies leading up to the financial market turmoil can be found in the report of the International Organization of Securities Commissions Technical Committee (2008).

High leverage and cyclical lending

Securitization allowed banks and financial institutions to originate more loans without additional capital reserves to compensate for heightened leverage. Banks got cash upfront and plowed it back into new lending, which created a cyclical lending pattern in the credit market. Meanwhile, the financial leverage of the whole system rapidly

increased. As discussed above, the leverage ratio in the five biggest investment banks before the crisis was around 35:1. This number was much higher for unregulated hedge funds in the market. OBSEs effectively concealed the real leverage level of sponsoring banks. Many ABCP investors also used ABCPs as collateral for borrowing investment capital in the market; as a result, the whole financial system, including the commercial and corporate lending sector, was highly leveraged and more vulnerable to crisis.

Implications and Regulatory Recommendations

Financial markets around the globe are very complex and interconnected. The sub-prime crisis of 2007 rolled into a global financial meltdown due to a loss of confidence in financial institutions and innovative financial instruments among investors. However, the collapse in confidence stemmed from the lack of transparency in financial markets. After a decade of the deregulation era, financial markets had become more opaque, with complex structured credit products and lightly disclosed investment instruments. The lack of a prudential regulatory framework facilitated many financial institutions to abuse innovative instruments to earn financial excess without any real capital capacity. This hands-off approach allowed banks to hide their risk-exposure levels by using OBSEs and other, even riskier investment models.

Regulatory recommendations

There should be no doubt about introducing regulation and oversight in financial markets after having gone through such a financial calamity, in which a lack of regulation appears to be the main culprit. It appears that the Obama administration in the US is committed to reinforcing the oversight of financial markets, though their plan for modernizing the financial regulatory system emphasizes the monitoring of the market through its own dynamics. However, the complexity of recent financial models and products, and the integration of the financial market, still pose challenges for regulatory bodies in terms of catching up with developments in the market. In recognition of this, the President's Working Group on Financial Markets (2008) and the Financial Stability Forum (2008) suggested that the following would be minimum requirements for any sustained and systematic improvement to take place:

- Strengthening prudential oversight of the capital, liquidity, and risk management of banks and financial institutions
- Enhancing disclosure with respect to off-balance-sheet entities
- Enhancing transparency in the securitization process and markets, and
- Reforming credit-rating agencies' processes and practices, particularly concerning structured credit products.

A comprehensive regulatory framework is necessary to protect the interests of related market participants as well as to restore confidence among investors. However, the regulation process should proceed carefully so as not to distort the independence of financial markets and the usefulness of financial innovation.

Conclusion

Financial innovation has enjoyed significant growth in a lightly-regulated financial market, spearheaded by deregulation as a result of Reaganomics since the early 1980s. Innovative instruments including the structured credit securities ABSs, CDOs and CDSs, and other off-balance-sheet entities such as SPVs and SIVs greatly supported the development and expansion of the financial markets. They enhanced credit availability in the market, thereby lowering credit costs and increasing efficiency.

However, the growth of unregulated financial innovation facilitated by reckless deregulation has made global financial markets less transparent and less stable, leading to the recent financial crisis. The misuse of innovative instruments included the securitization of sub-prime loans in the mortgage market, lightly-regulated off-balance-sheet entities, and unregulated structured credit products. The growth of ABSs, CDOs, and SIVs without prudential regulation distorted the transparency of the market. The deregulation era resulted in opaque financial markets with highly-leveraged financial institutions and complex structured credit products. A comprehensive regulatory system is necessary to put markets on the right track again and to restore investor confidence.

While Asian markets in general and the Japanese market in particular have had their own fair share of recent miseries in the form of the bubble of the 1980s and the Asian financial crisis of 1997, this time, too, they were not totally spared. The impact on these markets, however latent it might have been across various markets, was no less of a problem this time, either. Although these markets should have been better prepared due to their earlier experiences, we found that greater connectivity between U.S. and Asia-Pacific markets made them prone to all the investment fallacies and market mismanagement that was happening in the U.S. It is clear beyond doubt that the Reaganomics that led to uncontrolled and at times shabby financial products in the name of innovation did not solely impact the financial markets and the financial system within the U.S.; rather, it crossed both the Atlantic and the Pacific and reached markets far and wide.

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