

Proposed Regulations of Mortgage-Related Financial Instruments

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The causes of the current financial crisis, while numerous, all trace back to the American housing industry. The federal government's response to the crisis, thus far, has mainly entailed massive purchases of preferred stock from financial firms. While the Troubled Asset Relief Program (TARP) and various bailouts unaffiliated with TARP have served to stabilize the economy, capital purchases do not address the underlying market failures responsible for housing market crash. This paper proposes that subprime mortgages, credit default swaps, and mortgage-backed securities be regulated in order to ensure long-term, sustainable economic recovery.

INTRODUCTION

This analysis is intended to evaluate the role of credit default swaps (CDS), subprime mortgages, and mortgage-backed securities in the current economic crisis as well as to recommend new regulations in order to prevent further economic crises in America and around the world.

The collapse of the banking industry in September 2008, most notably resulting in Lehman Brothers's filing of the biggest bankruptcy in United States history, has resulted in necessary aggressive action by the Federal Government and the Federal Reserve. In July 2009, Neil Barofsky, Special Inspector General for the Troubled Asset Relief Program, estimated that the total potential Federal Government support could reach up to \$23.7 trillion in the form of loans, guarantees, and other programs.¹ Though the financial instruments that caused the crisis can appear extremely complex, the lessons learned from September 2008 are quite clear: Increased regulation of CDS, subprime mortgages, and mortgage-backed securities must be promptly instituted in order to protect American citizens from dangerous risks taken by financial institutions, and to protect financial institutions from the lack of transparency within the banking industry today.

Regulation needs to be created where absolutely no regulation exists; currently CDS, subprime mortgages, and mortgage-backed securities are completely unregulated. In the previous decade, it was CDS that were most aggressively defended by bankers from regulation. When the Commodity Futures Modernization Act (CFMA) of 2000 was passed, credit default swaps were exempted from regulation. The Securities and Exchange Act of 1933 and 1934 was similarly amended to clarify that the SEC is prohibited from regulating credit default swaps. CDS are the predominant tool of the credit derivative market, comprising 40 percent of the market in 2006, and having reached a peak of 70 percent of the market in 2004.² CDS are swapped, bought, and traded between major and smaller banks, hedge funds, insurance companies, and other parts of the financial industry.

¹ *Following the Money: Report of the Special Inspector General from the Troubled Asset Relief Program*, 111th Cong., 2d Sess. (2009) (Statement of Neil Barofsky)

² Rym Ayadi and Patrick Behr, "On the necessity to regulate credit derivatives market," *Journal of Banking Regulation*, 10:3 (2009), 181 (www.econlit.org/)

For decades, American banks and bureaucrats have reiterated that markets are self-fixing and therefore should be unregulated. Prominent federal personnel including former Treasury Secretary Robert Rubin and former Federal Reserve Chairman Alan Greenspan, as well as current National Economic Council Director Lawrence Summers, have advocated extensively against regulation of credit derivatives.

On July 24, 1998, approximately four years after the invention of the modern credit default swap,³ Alan Greenspan spoke before the U.S. House Committee on Banking and Financial Services. Regarding derivatives, Greenspan said, “They are clearly perceived to add significant value to our financial structure, both here in the United States and internationally ... Regulation that serves no useful purpose hinders the efficiency of markets to enlarge standards of living.” Ten years later, Greenspan has conceded slightly, but remains in denial of the dangers of total non-regulation of credit default swaps. In testimony before the House Committee on Oversight and Government Reform on October 23, 2008, Greenspan said, “The whole intellectual edifice ... collapsed in the summer of last year because the data inputted into the risk management models generally covered only the past two decades, a period of euphoria ... We should seek ways to reestablish a more sustainable subprime mortgage market. This crisis will pass, and America will reemerge with a far sounder financial system.”⁴

Although the American economy is recovering, the crisis has not passed. A more sustainable subprime mortgage market—and a sustainable economic environment—can only emerge if necessary derivative regulations are instituted. This analysis proposes the following policies:

Increase transparency between banking industries buying and selling credit default swaps. For companies selling protection (CDS insurance), oversight of mortgage contracts being insured needs to be significantly improved.

Require mortgage lenders to provide prime loans to individuals who qualify for them: if an individual qualifies for a prime loan, he or she may not receive a subprime loan. Ban all “teaser rate” loans, “stated income” loans (low documentation loans where mortgage brokers simply stated the borrower’s income), and “ninja” loans (for borrowers with “no income, no jobs, and no assets”).⁵

Reduce commissions and incentives paid to mortgage sales staff resulting from the sale of high-interest loans.

Modify credit-ratings systems utilized by Moody’s, Standard & Poor’s, and other ratings companies. Require more transparency between banks and credit raters in order to allow for enhanced and improved credit ratings of mortgage-backed securities.

Modify risk management. Improve risk management evaluations and provide risk managers with increased influence within derivative-related financial product units.

This analysis mainly addresses the need for regulation of credit default swaps, as CDS are the most common form of credit derivative and unique in that they are totally unregulated. In addition, CDS played a major role in instigating the wave of ongoing home foreclosures that felled the American banking system. In 2009, more than a million new foreclosures occurred—one every 13 seconds.⁶

³ Gillian Tett, *Fool’s Gold: How the Bold Dream of a Small Tribe at J.P. Morgan was Corrupted by Wall Street Greed and Unleashed a Catastrophe*, (New York: Free Press, 2009), 46-48.

⁴ *The Financial Crisis and the role of Federal Regulators: Hearing Before the Committee on Oversight and Government Reform, House of Representatives*. 110th Cong., 2d Sess. (2008) (Statement of Alan Greenspan)

⁵ Josef Ackerman, “The subprime crisis and its consequences,” *Journal of Financial Stability*, 4 (2008), 330, (www.econlit.org)

⁶ Center for Responsible Lending, National Foreclosure Ticker, Nov. 12, 2009 <http://www.responsiblelending.org/mortgage-lending/tools-resources/national-foreclosure-ticker.html>

A credit default swap is essentially an insurance contract, and it works like this: An institution, typically a bank, provides an individual with a home loan. The bank then buys protection from the risk of a credit event occurrence⁷—typically a default, bankruptcy, or restructuring of the loan—from another bank or an insurance company. The insurer is the protection seller. The protection buyer pays a regular fee to the protection seller, and if a credit event occurs, the protection seller pays the protection buyer a sum of money agreed to in the CDS contract. In the 16 years since the invention of the CDS, swaps have been bought, sold, and traded around the world. The following analysis serves to evaluate the problems that have resulted from lack of regulation of credit derivatives and credit default swaps, and provides regulatory solutions that will continue to allow financial system to hedge and distribute risk, while increasing protections for American citizens.

CREDIT DERIVATIVES AND THEIR ROLE IN THE CURRENT ECONOMIC CRISIS

The appeal of a credit derivative is basic: derivatives allow risk to be disseminated across companies and continents, creating opportunities for financial companies to hedge risk as well as take more risk. Increased protection from risk allows for increased market liquidity, as well as increased profits. For the protection buyer, in the case of credit default swaps, if a highly risky loan is successful, and the mortgagee (recipient of the mortgage) does not default, significant profits will be made. With increased protection from defaults via CDS, banks can distribute more loans. More Americans can own homes. If a risky loan results in a credit event but is insured via a CDS, little money is lost by the protection buyer. And because of the traditional belief that home values perpetually increase, a credit event will have a relatively small effect on the lender because the value of the home will have increased during the loan period.⁸

For the protection seller, the benefits of CDS are many. A triple-A rated tranche (the top-rated portion of a loan security, and therefore the least likely to result in defaults) from a mortgage-backed security is highly unlikely to include mortgages that result in credit events. Fees (premiums) received from insuring the loans are substantial and consistent. Even if a credit event does occur within the tranche, because the rest of the loans in the tranche are rated AAA, multiple credit events are highly unlikely. For tranches consisting of lower-ranked loans, insurers charge loan providers higher insurance premiums. Tom Savage, former president of American International Group Financial Products, or AIG (a major insurer of CDS and reported recipient of \$182.5 billion in federal bailout funds as of September 2009⁹), described CDS as such: “The models suggested that the risk was so remote that the fees were almost free money. Just put it on your books and enjoy the money.”¹⁰

The assumptions described above—all of which were accepted by individuals at the highest echelons of the financial system—have proved to be untrue. Some in the banking industry have blamed risk models for the economic crisis. Others have blamed the prevalence of badly-designed mortgages, or predatory lending, or simple greed. Ultimately, the truest cause of the economic crisis was severe information asymmetry within the banking industry.

INFORMATION ASYMMETRIES RESULTING FROM CREDIT DERIVATIVES AND CREDIT DEFAULT SWAPS

In order to effectively examine the relationship between credit derivatives, credit default swaps, and the economic crisis, it is necessary to first evaluate the contemporary relationship between homeowners and banks. Home loans existed long

⁷ Ayadi, 181

⁸ Ackerman, 330

⁹ David Lawder, “As AIG Stabilizes, New Bailout Plan Considered,” *Reuters*, Sep. 21, 2009 (<http://www.reuters.com/article/businessNews/idUSTRE58K3OI.20090921>).

¹⁰ Tom Savage, as quoted in Brady Dennis and Robert O’Harrow Jr., “A Crack in the System, Part II” *Washington Post*, Dec. 30, 2008.

before the modern credit derivative, and for much of history home loans have been considered safe investments for banks.

Deregulation has resulted in federal law preempting state usury laws, allowing banks to charge higher interest rates than previously allowed.¹¹ Complicated financial products were offered to homeowners as a result of deregulation. These included, for instance, optional adjustable rate mortgages (“option ARMs”), where an individual takes out a loan but owes no balance on the principal for a set period of time, often for two years and even up to five years. During this period, the principal has increased in size due to interest, and the homeowner has paid nothing, but is living in a home. When the balance begins coming due on a monthly basis, defaults inevitably occur.

As of July 2009, Barclays analysts had determined that 40 percent of borrowers with option ARMs were delinquent, and that as many as 88 percent of option ARMs packaged into securities would eventually default.¹² “Stated income” loans and “Ninja” loans (discussed in more detail below) create similar risk for lenders, insurers, and mortgagees.

Historically, individuals likely to default could often renegotiate their loans with their lenders. A single default could wipe out a lender’s profits made from many other loans; therefore lenders were eager to prevent defaults. CDS eliminated the incentive for lenders to renegotiate mortgages because profits would not be seriously affected by default.¹³ Incentives were developed for mortgage sales associates: high risk, high interest loans resulted in higher commissions.¹⁴

Lenders provided these low-quality loans because the profits they created were substantial; millions of new homeowners, even those with poor credit histories, were taking out mortgages and paying high interest rates on their loans. But lenders aggressively shielded themselves from the risky loans they distributed via credit default swaps. Information asymmetries quickly developed between protection buyers (mortgage lenders) and protection sellers (insurers).

There is a major loss of transparency when loan information transitions from lender to protection seller. Because the lender has an information advantage regarding the creditworthiness of the borrower, the protection seller is disadvantaged in his ability to evaluate the quality of the loan. This is the information advantage: it is the lender that evaluates the financial qualifications of the loan recipient, and the lender that screens and monitors the loan. The lender, having fully evaluated the riskiness, can then decide to buy protection. This opportunity to buy protection via a CDS can lead to further information asymmetries: the ability of a lender to buy protection means that he may be less likely to effectively monitor and screen loan applicants.¹⁵ “None of this was a problem as long as the value of everything was going up and defaults were rare,” said Eric Dinallo, a former superintendent of the New York State Insurance Department. “But the problem with this sort of unregulated protection scheme is that when everyone needs to be paid at once, the market is not strong enough to provide the protection everyone suddenly needs.”¹⁶

¹¹ Richard Posner, *A Failure of Capitalism*, (Cambridge: Harvard University Press, 2009), 21

¹² Jody Shenn, “Option ARM Defaults Shrink Recast Wave, Barclays Says,” *Bloomberg*, July 27, 2009 (<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aZKwTlyVwvx0>)

¹³ Posner, 23-25

¹⁴ Gretchen Morgenson, “Inside the Countrywide Lending Spree,” *New York Times*, August 26, 2007 (http://www.nytimes.com/2007/08/26/business/yourmoney/26country.html?_r=2&pagewanted=all).

¹⁵ Ayadi, 188

¹⁶ *Hearing to review the role of credit derivatives in the US Economy: Hearing before the Committee on Agriculture, House of Representatives*. 110th Cong., 2d Sess. (2008). (Testimony of Eric Dinallo).

THE NON-REGULATED MORTGAGE MARKET AND RECOMMENDED REGULATORY MEASURES

Presently, the credit default swap, subprime mortgage, and mortgage-backed security markets exist in a state of complete non-regulation. This is the result of decades of successful lobbying by financial institutions to maintain entirely free markets for subprime mortgages, mortgage-backed securities, and credit default swaps. These unregulated financial instruments, however, have caused the current financial crisis, from which we may never entirely recover.

Since early 1990s, credit default swaps, subprime mortgages, and mortgage-backed securities have surged in use and popularity throughout the financial industry. The subprime share of mortgage originations has more than quadrupled from 1994 to 2006, from 4.5 percent of the market to 20.1 percent. Subprime loan originations increased more than seventeen-fold, from \$35 billion to \$600 billion during the same period. Securitization of subprime loans has become extremely common, with 80 percent of subprime loans being securitized in 2006.¹⁷ The 2009 CDS market was valued at \$42 trillion.¹⁸ In 1994, the combined market value of all types of derivatives was an estimated \$12 trillion.¹⁹

CDS, subprime mortgages, and mortgage-backed securities are intrinsically linked. A return to market stability and growth can be best achieved through comprehensive reform of all three of these financial instruments.

Subprime Regulation

While credit default swaps are the financial instrument I believe has contributed most significantly to the financial crisis, subprime mortgages are the starting point for all securities and credit default swaps. It is the recommendation of this analysis that the following forms of exotic mortgages be completely banned:

“Ninja” loans, in which loan applicants have no job and no source of income.

“Stated income” loans, also known as “low-doc,” or “no-doc” loans, in which individuals, in most cases poor minorities, receive high interest loans while providing very little proof of income and/or assets.

“Option ARM” loans, in which individuals pay little or none of the principal at the time of the receipt of the loan, followed by a period of low- or no-interest payments, followed by a scheduled adjustment (increase) of the interest rate on the loan, resulting in progressively larger monthly loan payments. Most option ARMs are permanently staggered in structure, meaning interest rates continually increase over the course of the loan.

Furthermore, I recommend that banks be required to issue prime loans to those who qualify for prime loans. The Wall Street Journal reported in 2007 that by the end of 2006, more than 60 percent of people who qualified for prime loans had instead received subprime loans.²⁰ This statistic is easily attributed to the incentive structure at lending institutions: a higher interest rate on a loan results in a higher commission to the loan officer. In the banking world, this commission is termed a “yield spread premium.” A \$500,000 loan, for instance, typically results in a 2-percent yield spread premium to the loan officer—essentially a \$10,000 commission—if the borrower’s interest rate is a certain percentage higher than the prime interest rate.

While I do not propose outlawing yield spread premiums, I do recommend that they be distributed over the course of the loan rather than immediately following the loan’s settlement. More importantly, it is necessary to establish a

¹⁷ Lei Ding, et al. “Risky Borrowers or Risky Mortgages: Disaggregating Effects Using Propensity Score Models,” Center for Community Capital, 5, December 2008. (http://www.ccc.unc.edu/documents/RiskyMortg_Final_Dec11.pdf)

¹⁸ Gretchen Morgenson, “Don’t Let Exceptions Kill the Rule,” *New York Times*, October 18, 2009

¹⁹ Tett, 12

²⁰ Rick Brooks and Ruth Simon, “Subprime Debacle Traps Even Credit-Worthy,” *Wall Street Journal*, December 3, 2007 (<http://online.wsj.com/article/SB119662974358911035.html>)

nationally accepted credit score that qualifies individuals for prime loans, also known as “vanilla” loans (fixed interest rate mortgages with a percentage of the principal paid at the time of the receipt of the loan). If an individual qualifies for a prime loan based on his or her credit score, lenders should be required to offer the borrower a prime loan. For individuals who do not qualify for prime loans, I recommend that banks provide borrowers with traditional subprime loans that feature higher interest rates than prime loans. However, the exotic subprime loans described above should rapidly be eliminated from banks’ lending practices in order to create a more stable and safe set of loan options for potential homebuyers.

Mortgage-Backed Security Regulation

After providing borrowers with subprime loans, financial institutions often promptly securitize those loans in order to protect themselves from the possibility of default or to unload the loans from their books entirely. I recommend enhancements of and increases in transparency and risk discipline. Transparency needs to be improved between borrowers and mortgage lenders, lenders and insurers, and lenders and credit raters. Loan officers, financial institutions, and purchasers of mortgage-backed securities need to establish and sustain a more robust and pervasive risk-management culture.²¹

Transparency issues between borrowers and lenders can be resolved by altering lender incentives. The U.S. Department of Housing and Urban Development (HUD) should increase marketing of its Community Reinvestment Act (CRA) loans. I recommend that subprime lenders be required to inform potential borrowers of CRA loans, as Borrowers who receive CRA loans are 70 percent less likely to default than individuals with similar risk characteristics who receive subprime loans.²²

For investors, the financial crisis has made obvious the need for increased “due diligence,” rather than blind reliance on the judgments of third parties, such as ratings agencies. Ratings must function as a *complement* for a firm’s own risk assessment; ratings cannot be a substitute for due diligence.²³ With regard to ratings agencies, I propose internal and external reviews of rating practices in order to improve rating methodologies. It is essential that an external body evaluate any and all incentives provided to ratings agencies by financial companies relating to the rating of securities.

Credit-rating agencies have had great difficulty determining the value of mortgage-backed securities. Risk assessments and ratings are based on models of past experience, but because mortgage-backed securities have had a very brief lifespan,²⁴ and because their use developed most rapidly during a period of rising house prices, risk models and rating systems were incomplete. Ratings companies had less information regarding securities than loan originators, and purchasers of mortgage-backed securities often had the least information. Therefore, an increase in information sharing between loan originators, security raters, and security purchasers is necessary and should be mandated immediately. In order to prevent raters from “guessing” when they rate securities, new, comprehensive rating standards must be developed that allow for improved transparency, and new ratings models must be developed that include data from the 2008 housing market crash and are updated frequently with current housing market data.

I recommend that the Securities and Exchange Commission establish a body that monitors and analyzes transactions between parties dealing in mortgage-backed securities in order to enforce new transparency requirements. Still,

²¹ Ackerman, 332

²² Ding, 12

²³ Ackerman, 336

²⁴ Posner, 58

transparency by itself may not be sufficient to improve financial stability, because even a small amount of incomplete information may lead to banking crises in the long run.²⁵

CDS Regulation

Richard Christopher Whalen, senior vice president and managing director at Institutional Risk Analytics, describes CDS contracts as “high-beta risk, that is, highly correlated with the broad financial markets. Unlike natural disasters and other low-beta risks, where the frequency of events is relatively low and uncorrelated to the financial markets, in CDS the high degree of market correlation ensures that most or all of a portfolio of single-name CDS contracts will deteriorate when economic conditions turn negative.”²⁶

I propose a two-pronged regulation of CDS. First, protection sellers like AIG must maintain capital equal to 33 percent of every CDS insured: for every \$1,000 of subprime mortgages insured, protection sellers must divert \$333.33 to a safe holding in order to guarantee that insurance can be provided to protection buyers in the event of a massive default wave similar to what America has recently experienced. This requirement will ensure that insurers effectively evaluate the loans they insure, which will result in fewer bank failures and reduced hazards within the financial system.

Secondly, mortgage lenders should be required to maintain 40 percent of all subprime loans on their balance sheets. While originate-to-distribute loans allow for increased liquidity and capital flow into the market, as well as significant risk hedging opportunities, these loans, which are made and then immediately sold off, have also proven themselves dangerous to the market’s overall functionality due to their aggressive securitization. By requiring lenders to maintain 40 percent of all subprime loans on their books, lenders remain partially responsible for subprime loans originated, which will result in increased due diligence by lenders when originating loans.

While Commodity Futures Trading Commission Chairman Gary Gensler recently recommended that any and all financial firms be allowed to process trades in the \$300 trillion swaps exchange—currently swap trades can only originate from the brokerage desks of major Wall Street banks²⁷—this analysis’s recommendations will result in a more rapid, more effective return to market sustainability than simply allowing more firms to enter the CDS market.

PREDICTED FINANCIAL OUTCOMES AND RECOMMENDATIONS

Long-term, *sustainable* economic growth will be the ultimate result of regulation of CDS, subprime mortgages, and mortgage-backed securities. During the previous 15 years, mortgage-related financial instruments have proven themselves too dangerous for unregulated trading on the free market. This paper’s recommendations, if enacted, will result in savings on a significant scale for potential borrowers, banks, the federal government, and, consequently, all taxpayers.

While I acknowledge that some potential borrowers will be prevented from purchasing homes as result of this proposal, resulting in a decrease in market liquidity, the overall economy will benefit. Individuals who do qualify for home loans will receive improved mortgages that are better suited to their needs and finances. More importantly, huge numbers of American borrowers will be shielded from defaults and foreclosures as a result of increased information and

²⁵ Mariassunta Giannetti, “Financial liberalization and banking crises: The role of capital inflows and lack of transparency,” *Journal of Financial Intermediation*, 16 (2007), 35, (www.econlit.org/)

²⁶ Christopher Whalen, “To Stabilize Global Banks, First Tame Credit Default Swaps,” *The Institutional Risk Analyst*, January 21, 2009 (<http://us1.institutionalriskanalytics.com/pub/IRAstory.asp?tag=335>)

²⁷ Matthew Leising, “OTC Swaps Clearing Must Be Open to All Firms,” *BusinessWeek*, March 11, 2010 (<http://www.businessweek.com/news/2010-03-11/otc-swaps-clearing-must-be-open-to-all-firms-gensler-says.html>)

transparency in the loan process, enhanced loan distribution, and the presence of loans that are better suited to potential borrowers.

For banks, short-term profits may diminish as a result of these proposals. Fewer loans will be distributed and fewer interest payments will occur. But long-term market stability will ensue, and I predict that within two years of these suggestions being instituted, aggregate profits in the banking sector will have increased in comparison with 2009. Increased profits will result from reductions in mortgage defaults and increased information in mortgage-backed security ratings, allowing for enhanced purchasing opportunities of mortgage-backed securities. As well, more transparent credit default swaps will allow for improved insurance selling.

Between October 2000 and December 2006, twenty-four American banks failed. Since the January 2007, nearly 200 banks have failed.²⁸ On November 1, 2009, CIT Group, Inc. filed the fifth largest bankruptcy of all time. In December 2008, CIT received \$2.3 billion in Troubled Asset Relief funds in the form of U.S. government purchases of preferred stock. Since filing for bankruptcy, CIT has stated that all common and preferred stock will be cancelled upon emergence from bankruptcy protection; taxpayers have lost \$2.3 billion.²⁹

Further bailed-out bank bankruptcies are likely to occur. Taxpayers are unlikely to recover any funds from failed banks that were previously bailed out. This paper's recommendations, if instituted, will prevent future bailouts and bank failures by improving banking methods and market stability. Increased governmental oversight and increased transparency will be moderately expensive to institute, but savings will result in the form of a reduced number of banks requiring bailouts, a reduced number of bank failures, and a reduced number of home foreclosures.

How much the government will recover of the hundreds of billions of dollars it has distributed to financial institutions is unknown. But a return to more practical banking methods through regulation of CDS, subprime mortgages, and mortgage-backed securities will allow banks to return to profitability and consumers to make more effective decisions when considering buying a home.

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²⁸ FDIC, Failed Bank List (<http://www.fdic.gov/bank/individual/failed/banklist.html>)

²⁹ Mark M. Meinero, David Ellis, Colin Barr, "CIT files for 5th largest U.S. bankruptcy," CNN.com, November 1, 2009 (http://money.cnn.com/2009/11/01/news/companies/cit_group/index.htm)

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