The 2008 Financial Crisis Context

Poor investments and lack of mortgage oversight fomented an unstable environment where, in the United States, interference in the market from government-sponsored enterprises (GSE) ensured lenders the ability to loan even if debtors were unable to afford the cost of the loan.[1] In other words, credit was outrageously easy to obtain. The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) are both government-sponsored enterprises that, in 2008, were two of the more prominent investment banks providing loans to homeowners. Fannie Mae and Freddie Mac created mortgage-backed securities (MBS) from the promissory notes they received from debtor homeowners.[2] "In early September 2008, Fannie Mae and Freddie Mac had a combined $5.4 trillion in outstanding debt… backed by mortgage assets that were falling in value and only limited amounts of capital,"[3] and the circumstances of Fannie Mae and Freddie Mac poised problems for the housing market. The securities, or mortgage assets, were bundled as Special-purpose entities (SPE) and Collateralized Debt Obligations (CDO), and were sold to investors and investment banks. When homeowners forfeited the payment of loans, better known as defaulting, the entire environment of securities became volatile because MBS developed into investments which did not yield high returns.[4] The nonpayment of mortgages was the main point of failure that collapsed the entire financial structure.

The scope of this paper referenced the events leading to the 2008 Financial Crisis in the United States housing market and the global market, although this paper did not focus on the 'housing bubble' or other commonly known terms which relate to the events of 2008. The purpose of my argument was to describe innovative and insightful methods of thinking institutionally about the social and economic constructions that change the political-economic atmosphere. And especially in thinking fiscally and monetarily, improved and efficient institutions must be created in order to contain market failures. Therefore, human society will be able to better control markets, instead of markets controlling humans.

Coordination Failures

Through a complex arrangement of economic agreements, tradable assets known as securities are created by combining and redistributing debt, and more importantly their economic market function acts as a representation of a form of partially excludable, or limited, and partially rivalrous, or competitive, property; this process is known as securitization.[5] In the event of one such market externality, coordination failures, the otherwise positive, value-creating, feedback loop like the securitization process impacts economic markets negatively with potentially extreme and disastrous consequences. Coordination failures "in which consumers do not buy goods because they cannot sell labor, and firms do not buy labor because they cannot sell goods"[6] is the typical Keynesian representation of economic recession, which is why full employment is desirable, but in securitization this market failure is represented by replacing the variable of goods and services with tradable assets. Since securities are additionally a different type of property, they therefore contain a different set of property rights in contrast to private goods. Additionally, since private goods are inherently the only goods which are completely rivalrous and excludable,[7] the institutional impact of securitization produces network externalities,[8] and more specifically nonconvexities; nonconvexities are inconsistencies in the curved, convex, shape of a graph representing the relationship of a bond's yield changes and changes in price.[9]

The German Allianz Insurance Company is well integrated with a Cooperative Neo-Corporatist institution that allows for the flexibilities needed to preserve economic stability, while the American equivalent, American International Group (AIG), is correspondingly as integrated with an Adversarial Corporatist interest aggregation system. The stage was set in the later part of the 2008 year, and the world was about to experience the climax of an irreversible economic catastrophe.

Glass-Steagall Act of 1933

In an attempt to constrain potential risky investments of commercial banks, and also to possibly account for the flaws in the theories of securitizations, "Senator Carter Glass (D-Va.) and Congressman Henry Steagall (D-Ala.) introduce[d] the historic legislation that bears their name," and created an institutional, legal-bureaucratic, barrier categorizing banks as either commercial or investment.[10] By eliminating the possibility of risk in commercial banking and guaranteeing that risk could only be taken through investment banking, the Glass-Steagall Act addressed the risks associated with securitization through accountability measures; the act held banks accountable by forbidding banks from shifting losses to consumers, and effectively created the commercial banking industry as separate from the investment banking industry. With regard to the goal of comprehending the cause of the Great Depression, the Senate Committee on Banking and Currency conducted inquiries to find a solution; Ferdinand Pecora was appointed head of the council. The following narrative depicts the reasoning for implementation at the outset of the Glass-Steagall Act:

"So, one after another, the lions of Wall Street underwent Pecora's blistering examination. The public was shocked at the degree of greed and corruption the bank executives admitted to. Before the Pecora hearings, as they became known, the reputations of the country's bankers were unscathed. As a matter of fact, the banks were praised for their conduct during the nationwide banking failure that followed the stock market crash. The public was unaware that the banks' unscrupulous tactics contributed significantly to the financial system collapse."[11]

While this depicted the economic climate of the Great Depression in 1929, the historical rhyme of the 2008 Financial Crisis suggests that Glass-Steagall might have prevented economic catastrophe despite the attacks it received. The austerity of the act slowly deteriorated receiving its first direct attacks in the 1960's. After continuous lobbying from banks, a Federal Reserve reinterpretation in 1987 from Chairman Alan Greenspan, and further unfastening of the act in the early 1990's, 66 years of separation between investment and commercial banks ended in 1999.[12]

The Securitization Process

Without a clear separation between investment and commercial banks, the payments that groups of homeowner pay are more easily bundled, and eventually these payments are distributed to a group of investors that effectively receive the interest and principle payments of the homeowners.[13] In fact, the securitization process is most efficient if the homeowners do not default on loan payments because that guarantees that the investments will have high returns. Shown in Figure 1 is a visualization of this process. Clearly, investors would be unwilling to knowingly discard their wealth, and in the case of lackluster MBS, they withdrew their investments. The overall impact rippled throughout the entire chain of mortgage securitization mainly due to the fact of the matter. Subprime mortgage lending led to loan default because "the lender would have the ability to make loans while the [U.S.] Government guaranteed its potential losses;"[14] even conservative lending practices were not incentivized, and this in essence increased the number of transactions between creditors and debtors.

Fannie Mae is one of the most critically acclaimed actors that participated in subprime mortgage lending. The MBS trusts it established, beginning as early as 1997, created a complex economic agreement[15] that allowed any person to invest in the financial gain of lending which was formerly reserved solely for commercial banks. Investors were allowed to purchase certificates for the economic privilege of receiving a portion of the total loan repayments of the bundled promissory notes in the MBS.

In February 2003, an agreement worth roughly $560 million specified that "each MBS represents a beneficial ownership interest in one or more Mortgage Loans secured generally by first mortgages on apartment complexes with at least five residential units…"[16] And, in a separate agreement made in June 2002 worth $23 billion, Fannie Mae stipulated that "the SMBS [stripped mortgage-backed securities] represent beneficial ownership interests in the excess yield attributable to certain first lien, one- to four-family ('single-family'), fixed rate, residential mortgage loans underlying certain Fannie Mae Guaranteed Mortgage Pass-Through Certificates unrelated to the Trust MBS…"[17] In simpler terms, homeowners paid their interest and principle payments to investors who participated in the trust agreements that Fannie Mae created through securitization.

AIG Failure and Allianz Resilience

AIG Failure

Theoretically, the securitization process is only successful if the following two conditions are met; every actor honors their debt and likewise properly utilizes their credit. The reality of the 2008 Financial Crisis depicts that the reality did not satisfy both conditions, and systemic financial stability vanished. The reason AIG failed is two-fold; the first reason being a direct impact to AIG and the second reason being an indirect impact.

First, the defaulting MBS of Fannie Mae, Freddie Mac,[18] and a number of other large financial institutions led to a securities crisis. Many of these financial institutions had a number of credit default swaps (CDS), shown in Figure 2,[19] which were taken out on their securities to and from a number of other financial institutions that had been insured by companies like AIG. And, AIG had "credit default swaps [which] stood at roughly $500 billion;"[20] these CDS[21] were a kind of insurance. While Fannie Mae and Freddie Mac were doing well, in addition to other large SPE that were owned by a variety of large financial institutions, so did AIG because "[i]t was generating as much as $250 million a year in income on insurance premiums"[22] in conjunction with the CDS process. But, when the financial industry lacked liquidity, AIG was obligated to pay claims without an earning potential to offset the costs of those claims.[23] And, due to CDS, AIG experienced a direct impact involved in insuring SPE because it overextended its assets. AIG did not have the ability to honor every insurance claim that it received.

Second, the inability of homeowners to pay their mortgage debt to commercial banks sold as MBS to investment banks[24] continued the negative network externalities that lead to a complete market coordination failure; this process continued until the United States government intervened by placing Fannie Mae and Freddie Mac under a conservatorship on September 7, 2008[25] and by bailing out AIG; all of whom had major roles in the United States economy. By the time government bailouts took place, the economic damage was already done totaling over 605.4 billion in outflows; at the time I wrote this paper in January 2013, only 456.6 billion of which has been returned to the government as inflows.[26]

Yet as of December 11, 2012,[27] the United States Treasury yielded returns from the bailout AIG received during the 2008 Financial Crisis; by providing the necessary financial support that AIG needed, the United States Treasury was able to make a net $18.6 billion dollars in profit.[28]

The incentive structure of the United States Adversarial Corporatist economic institution encouraged competition, but ignored the inherent interconnectedness each economic actor has with every other actor. The first impact AIG experienced was less likely in times of prosperity; this incentivized AIG to act independently. Similarly, homeowners, government-sponsored enterprises, and other more passive entities such as the United States government were incentivized to act self-reliantly. In times of crisis, Adversarial Corporatist institutions create disastrous impacts because like any other system, if one integrated node in the network endures pressure, then every other node will fundamentally undergo a resulting impact; under certainly poor circumstances, a point of failure ripples through the entire network.[29]

Allianz Resilience

Meanwhile, consolidated economic structure in Germany enabled Allianz to shelter its investments, primarily because the German Neo-Corporatist economic culture allows for multiple companies to collaborate; cooperation is possible through merger and acquisitions, and partial ownerships of companies has happened in a stark difference between Allianz and AIG. This concept of economy allows German companies to share profit and losses in a manner that minimizes the chances of any single company's failure. In addition, AIG sold CDS to Deutsche Bank[30] which works closely with other German banking institutions and the German government; a major banking union has existed in Germany since the early 1950's.[31] Moreover, the merger between Commerzbank and Dresdner Bank meant Allianz had "a 30 percent stake in the enlarged Commerzbank, as well as a long-term co-operation agreement on the distribution of insurance and investment products."[32] Toxic assets, those securities with an undeterminable amount of risk and value, impacted Allianz and AIG; Allianz though does not appear to be very directly active in, what is currently estimated as, the $600 trillion[33] credit swap market.[34]

Adversarial Corporatism or Collaborative Neo-Corporatism

The relationship between government and business and the exact methods that the governments of both Germany and the United States used in interacting with their respective insurance corporations demonstrates that different governing styles impact the economic resiliency of an economy.[35] In January 2009, the German government took a 25 percent stake of Commerzbank in an agreement with Allianz[36] which also had ownership due to the Dresdner bank merger; over half of the shares of Commerzbank are not owned by Commerzbank. Both government and corporations were able to coordinate in the German context.

The United States government could not elegantly make the same decisive agreements in forming recovering efforts for the overall economic turmoil. In September 2008, the United States "government-appalled by what the Lehman bankruptcy had done to the credit markets-was ready to take over AIG."[37] In the American context, AIG was dependent on the failures of other businesses for support, and AIG was on the brink of bankruptcy when the United States Treasury assisted it.

Asymmetric information is often a consistent market externality, and the results can cause major variations to an otherwise stable economy. The United States' free market political-economic culture discourages major bailouts and government interaction with corporations; in fact, only eight GSE had government debt in 1997.[38] The communication pathways between the nodes of the German economy were strong enough to ensure all major actors could respond in a coordinated fashion. German Allianz did not fail, but rather became a more prominent player on the global stage, whereas AIG almost went bankrupt because the communication pathways were not strong enough in the American economy.

Adversarial Corporatism

As a response to the 2008 Financial Crisis, the United States Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act in July 2012.[39] But, the lackluster status of the fiscally responsible attempt at reform was not positive for forming a better economic institution in the United States. The Federal Reserve was framed in the act as a competitor in that it would be able to, after a two-thirds vote of Financial Stability Oversight Council, impose regulations and constraints on a failing corporation – especially in instances that may cause great harm to economic markets and financial stability. The following analysis provides insight into understanding the implicit flaws of the Dodd-Frank Act in reacting to an economic crisis:

"Once this reaction happens, and because the law says there can be no bailouts, the market will refuse the firm's paper, thereby suddenly inducing a run—investors will not want to wait to see what might happen at the council. Nor will investors want to touch any other large financial firm's paper for fear it too may be in trouble. The run will spread instantly throughout the banking industry, as such runs did after the Lehman episode in September 2010, and without the capacity for bailouts several firms rather than only one might end up in bankruptcy. Lehman's sudden bankruptcy was bad enough. Many Lehmans occurring all at once would be the financial equivalent of a nuclear disaster."[40]

The highly competitive mindset between corporation and government in the United States, at this point in time, seems to be the historical equivalent to the struggle between military powers during the Cold War Era. It appears, at least, that there really would not be a victor if another economic crisis happened in the United States. Only the remaining economic actors that are relatively less destroyed would have the opportunity to rebuild in the rubble. The authority granted to the United States Federal Reserve resembles the nuclear launch codes that should never be used; hence, the passage of the Dodd-Frank Act has little reformative effect, and "will never be used except to liquidate a bank the Fed has decided to close down."[41] The notion of meaningful collaboration, or even stabilizing a failing industry, is not present with the Dodd-Frank Act. Moreover, increased divisions between corporation and government, and the lack of communication between the two would be a more likely of a scenario. A business would much rather fail gloriously than be forced into dissolution, although a business would in the ideal sense have partners that are welcoming and willing to form strong alliances.

Collaborative Neo-Corporatism

While Germany has not recovered all of its losses, it has been able to stabilize its markets since the 2008 Financial Crisis; "Germany had about 25 percent of the population in the eurozone and a similar share of the unemployed workers. Its population share is [still roughly 25 percent of the eurozone], but it has only 17 percent of the unemployed [population in the eurozone]."[42] And, while Europe still struggles to return back to the stability it had before 2008, the European banks are reliant upon the monetary union of the eurozone. A fiscal union with a unified central banking system would provide the necessary organization and configuration of knowledge to adequately respond to the economic problems poising Europe.[43] The similar structure between the German banking union and the European Central Bank fundamentally produce the same outcome of information sharing; and the autonomy to monitor and assist banks within a designated region are alike. The main difference is the size, and the "single supervisor for all 6,000 eurozone banks"[44] is highly controversial to European decision-makers.

Although German markets are recovering, the economic impacts of CDS are notable aspects of a continuing unregulated, and perhaps, unaccounted for problem. "The CDS market is far from transparent" and very few people understand the specific nuances of whom sold who which CDS; furthermore, the threat of a large investment bank having the inability to maintain commitments and pay premiums to other economic actors on sold CDS is a constant fear.[45] For example in January 2011, Deutsche Bank projected that Commerzbank exposed 47.1 percent of its entire book value to the hazardous foreign assets of Greece, Portugal, and Ireland;[46] and the CDS of Commerzbank could jeopardize it and its economic partners if the eurozone becomes a larger crisis. To rephrase the economic insinuations of the problem, if Greece were to default on its debt similarly to that of Fannie Mae or Freddie Mac, then Commerzbank could find itself in a similar position to that of AIG in September 2008. And, if other banks across the world were to fall victim to the same disastrous outcome of AIG, the world economy could be in ruins. Even with the improved Neo-Corporatist environment, a possible CDS crisis is likely to become financially dangerous to the European economies if not the global economy.

Impure Public Goods

It is vital to notice that CDS have similar characteristics to impure public goods, which are partially rivalrous goods, or congestible goods, that lead to the reduction of benefits for each participant in the usage of these possessions; it is also crucial to understand that this commonwealth is never completely destroyed.[47] Partially excludable or partially rivalrous goods are dependent upon the institutional framework that supports them; since these types of impure goods are naturally ridden with externalities, the Samuelson Condition is extremely applicable; "[t]he optimal quantity of a good" that impacts a group of two or more entities is characterized by the Samuelson Condition[48] which discourages the substitution of public goods for private goods, and vice versa. In addition, the control of congestion is important because a proper regulation of either the frequency of the impure public good or the membership of the impure public good is required; otherwise, not everyone with the desire of participation will have an optimum level of success.[49] More directly, the securitization process distorted both the rivalrous and excludable nature of a private good; subsequently, the mortgage, or the promissory note, along with the payments from homeowners was divided into bonds sold by SPE. Additionally, the SPE is now relative to an object wagerable through the CDS process, and the original intrinsic qualities of the mortgage are distorted. In fact, the CDS process coupled with the SPE has the ability to take any and all forms of assets, and it results in the newfound ability of changing any good into an impure public good. This is the primary reason as to how the size of the world's GDP can be relatively 10 times as small, "or roughly 10.83% of the worldwide value of the global derivatives market [CDS market]."[50] To state this idea in a different manner, a variety of externalities are created, and standard economic models will not be able to predict the irrational nature associated with market failures.

Due to asymmetric information that is inherently connected to externalities, coordination failures are likely. And, the root cause of economic crisis' involving CDS is the integral nature of the goods that are created. The only way to form a growing economy is to create lasting and adaptive institutions that compensate for irregularities and nonconvexities within the global economy, or the United States and German economies.

Paul Romer noticed that "what nonrivalry shows is that these features are linked to nonconvexities."[51] Meaning, if a good is even partially rivalrous, then nonconvexities are also fundamentally linked. Nonconvexities are areas of nonuniformity that inevitably lead to market failure especially in cases where market models do not identify irrationality – the current ideal economic model depicts an arched, continuous, form that identifies only the convexity relationship between bond's yield changes and changes in price.[52] Yet, the ideal is not the reality and in the 2008 Financial Crisis, irrational behavior could have been represented as nonconvexities.

Conclusions

The economic optimist will look at the 2008 Financial Crisis, not as a failure of twenty-first century economics, but rather as a learning opportunity and a second chance for fiscal accountability and restructuring of monetary institutions. But, the 2013 context is quite fragile in that much of the global economy still is in a recovery process. Would international exchange be able to survive another major credit crisis? First, the lessons that AIG and Allianz provided illustrated the role each insurer had in 2008, and the nuance of the five year transgressions of their roles. Stated simply, Allianz capitalized on the losses of AIG and was only able to do so based on their position within the overall global economic network as follows. AIG did not have the financial means to cover its losses, and was not supported by the United States Adversarial Corporatist environment. Allianz received the necessary assistance it needed based upon the coordination of financial institutions that is prevalent in the

German Collaborative Neo-Corporatist model.

Second, the international economic order continues to remain integrated and volatile due to irregularities and irrational behavior. If the United States has dominated the structuring of the global economy, then it is likely that international economics resembles a more Adversarial Corporatist model rather than a Collaborative Neo-Corporatist model. Yet, the world is highly integrated, and "[t]he core is also very densely connected."[53] If the core of the economic system is structured similar to that of the German Neo-Corporatist model, which benefited Allianz, than perhaps coordination failures will be averted and the potential of disastrous impacts will be planned for.

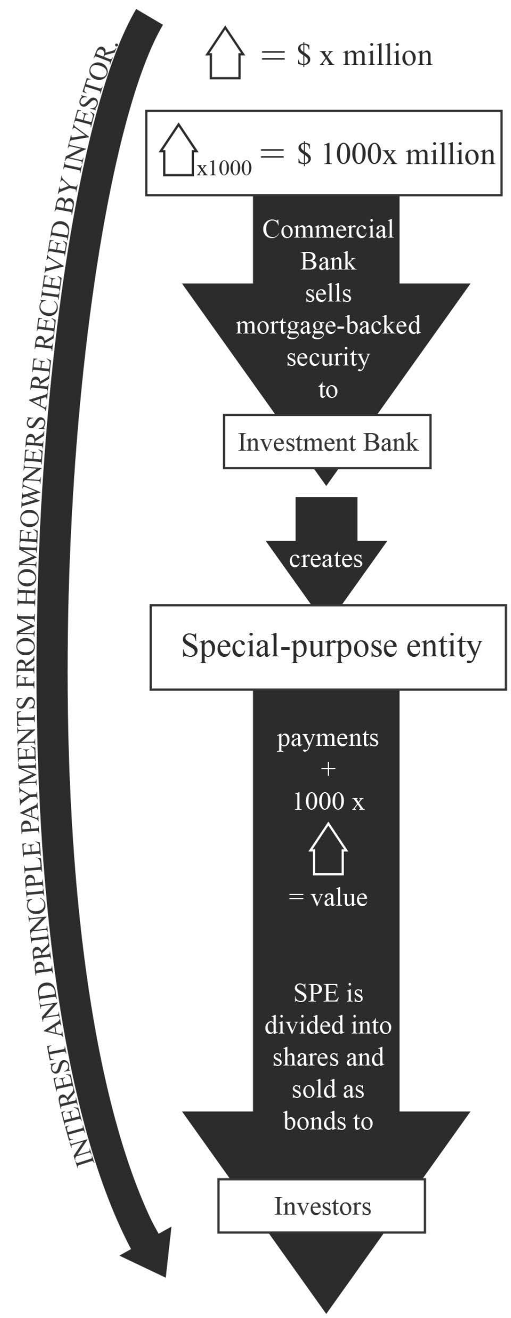
Third, and in this manner, any economy wishing to better shelter itself from the negative network externalities of the CDS process, including the securitization of assets has an option to persist or to crumble. Financial resilience is possible for a reforming adversarial economy or a growing collaborative economy.

The following three principles are derived from the synthesis of interactions that Allianz and AIG had with their respective states in the context of the 2008 Financial Crisis. First, technique in establishing economic measurement devices should efficiently coordinate the availability of resources. In this aspect, efficiency of an optimum net worth or value can grow based on a 'positive-sum' game; meaning, the economy of scarcity mindset can shift to an economic thought-process based on abundance only if an effective allocation system can ensure that all economic and political actors are held accountable. In Germany, Allianz was able to coordinate with other financial and political actors; unlike the former, AIG in the United States could not provide even the necessary accountability measures for itself due to overextended assets.

Second, coordinated financial and legal institutions must be able to maintain a degree of flexibility while conforming to a consensus driven standard of communication and action. Opportunities to collectivize decision-making in a collaborative manner would ensure individual rights are respected of not only societies, but also persons; this includes both material and non-material property. The German political system represents a five-party system, whereas the United States equivalent represents two parties, but the more fascinating difference of the two western political economies is that of Germany, in so far as the level of communication between Allianz, other financial institutions, and the German government during the Financial Crisis. Instead, the United States mimicked the same historical reference that led to the Glass-Steagall Act, and implemented the Dodd-Frank Act without collaborative insight from financial institutions.

Third, a focused information system must be integrated with the methods of manufacturing and must also align with the distribution of resources and services similar to that of a single organism with multiple parts; each part is no greater than the whole, and the sum of those parts are no greater than the individual. AIG has a coercive relationship with the United States government; AIG only recently regained its independence from partial government ownership. Allianz collaborates legitimately with the German government due to the strong relationship that grew over time. Poor procedures demonstrated in the Dodd-Frank Act precisely demonstrate an aggressive tactic of United States legislators to create vague institutions. Looking forward, these procedures and institutions also must have a standardized measurement that is distinguishable and unique, and unchanging from other forms of ways and means.

Mortage-backed Security Securitization Process



One homeowner borrows a loan of $ x million from a commercial bank to purchase a home. The homeowner pays ‘y’ percent of the value of the loan (per year as monthly payments) to reduce the debt the homeowner now has from interest and principle. If this process is repeated by 1000 homeowners, then the commercial bank has the ability to bundle the loans (promissory notes) together and sell the package of loans to an investment bank for more than $ 1000x million to create profit. The investment bank gains the right to collect the payments of the homeowners.

The investment bank now receives all monthly payments from the group of homeowners. At this point in the process, the homeowners may still be making payments to their commercial bank, but if so, the commercial bank is then forwarding those payments to the investment bank which owns their promissory notes.

The investment bank creates a special-purpose entity (SPE) that purchases and owns the assets (promissory notes) that the investment bank purchased from the commercial bank. The SPE is divided into portions, commonly known as shares or bonds. If this is the end of the process, then these shares are then sold in the market.

Although in some cases, a larger investment bank may purchase some or all of the original SPE shares and replicate the process by creating a SPE that combines a variety of assets, not limited to MBS.

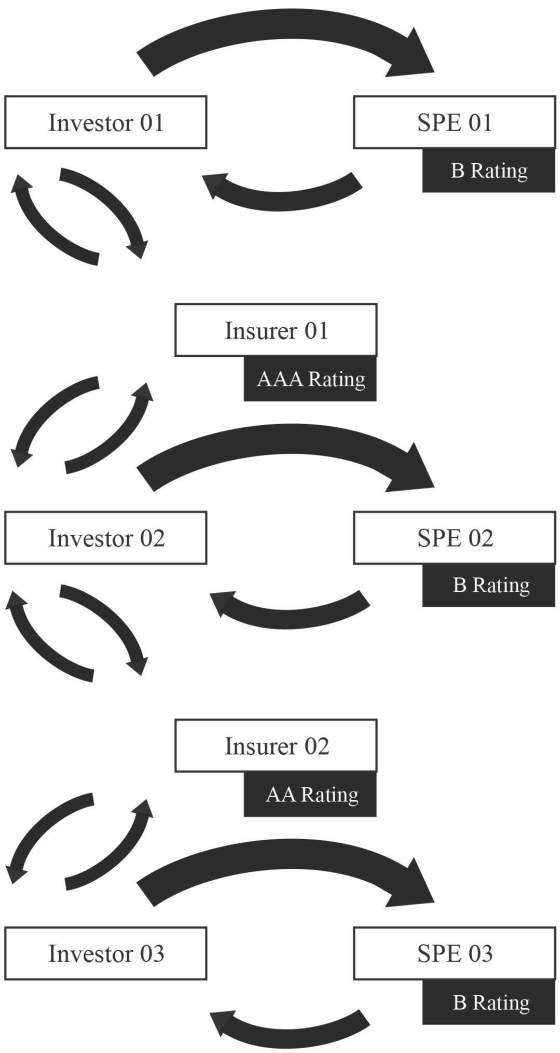
And, the securitization process still continues if collateralized debt obligations (CDO) are formed; a further evolution of the SPE where the assets are divided into three classification of risk:

Equity	- First group to lose profit, most risk, highest return
Mezzanine	- Next group to lose profit, less risk, less return
Senior	- Last group to lose profit, least risk, least return

Investors have a choice to purchase bonds based on the level of risk that they are willing to take on the assets. In summary, the payments that groups of homeowner pay are bundled, and eventually these payments are distributed to a group of investors. But, the securitization process is most efficient if the homeowners do not default on loan payments.

Figure 1: Graphic by the author

Credit Defualt Swaps Process



Note: An infinite amount of agreements can be made between investors and insurers; an infinite amount of SPE can be created.

This is a simplified diagram. Relative to it, an infinite amount of arrows can be drawn between investors and insurers, and investors and SPE.

The Credit Default Swap (CDS) Process involves three types of actors; Investors, Insurers, and SPE. Each actor can resemble other commonly known actors. Rating agencies also are important actors that are indirectly involved.

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Investors:
Pension funds and hedge funds are usually different types of investors.

Insurers:
Not necessarily insurance companies, and can also include any large financial institution that sells a CDS; this includes investment and commercial banks.

SPE:
Special Purpose Entities are created by corporations and companies. Corporations and companies can also be insured in the CDS process.

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Why do CDS happen?
Investors want to purchase bonds or stocks from the SPE.

1. If the investor is a pension fund and needs a higher credit rating, then the insurer and the pension fund arrange an agreement. In the event the SPE or companies are bankrupt, then the insurer pays the claim. The insurer receives a premium from the pension fund.

2. If the investor is a hedge fund, the insurer and the hedge fund are essentially gambling. The same agreement that the pension fund has with the insurer applies.

Figure 2: Graphic by the author

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2 Daniel Giedeman, “Fannie Mae, Freddie Mac, and the Freedman’s Savings Bank,” *Review of Black Political Economy* 38, no. 3 (September 2011): 205–226, doi:10.1007/s12114-011-9090-6.
3 Ibid.
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19 This process involves hedging and leveraging financial trades for investment potential. Generally, an insurer is able to provide insurance to investment banks based on the credit rating given to it from one of the major credit rating agencies. Standard and Poor’s Financial Services LLC., Moody’s Investors Service, Inc., and Fitch Ratings Ltd. Publically rate the financial stability of other financial institutions. A higher rating allows more credit worthy economic actors to take on more risk and to insure more of other economic actors’ assets.
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