

## Six Degrees of Separation

By Andrew Davidson

In the simplest terms, what went wrong in the sub prime mortgage market is that the people responsible for making loans had too little financial interest in the performance of those loans and the people with financial interest in the loans had too little involvement in the how the loans were made.

The capital markets are a wonderful vehicle for transferring risk and providing capital to lending activities. But when the transfer of risk leads to a lack of diligence, markets become dysfunctional. To see how this can happen, let's start with the most basic lending transactions.

### One Degree of Separation

For much of the last century, it was the savings and loans, or "Thrifts" that provided the bulk of the mortgage loans. In the traditional lending model, the Thrift raised money via deposits from its customers and then lent that money to other customers for home purchases. If the borrower was unable to make its mortgage payments, the Thrift would suffer the consequences directly. With the advent of deposit insurance, the depositors were protected and the only risk was to the capital of the institution. With limited risk management capability and limited ability to raise deposits outside of their home markets, Thrifts were subject to a boom and bust cycle that meant that capital flows for mortgage lending were uneven.

### Two Degrees of Separation

The secondary market for mortgages was developed to separate the process of creating loans from the capital required to fund the loans. In the secondary market, the risk of borrower default would be transferred to an investor. Investors for the most part however, were unwilling to take on the risk of borrowers they did not know. To facilitate the availability of capital, Ginnie Mae, Fannie Mae and Freddie Mac were established. Without getting into the full history or details, the main impact of these agencies was to take on the credit risk of borrowers and allow other financial market participants to provide the funding for the mortgages.

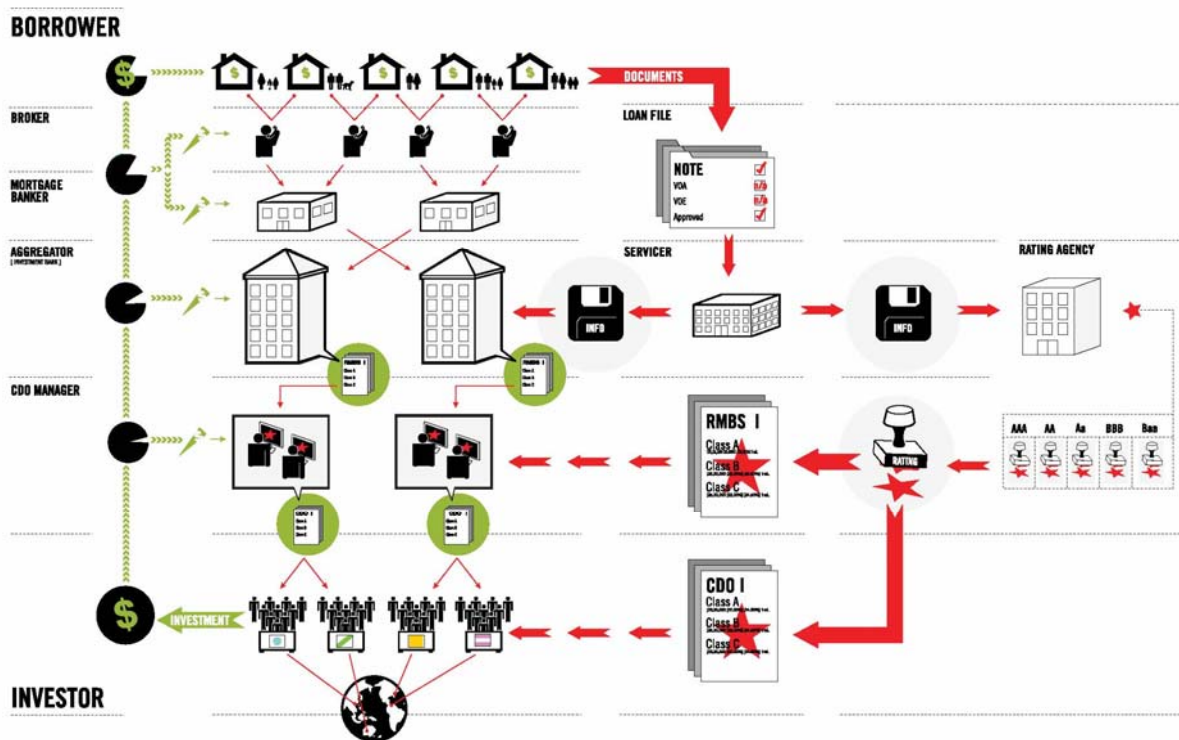
These agencies, as well as the mortgage insurance companies, bore the risk of default. To protect themselves they established underwriting criteria for the types of loans they would own or guarantee. While they did not originate loans (and are prohibited from doing so), they are actively involved in monitoring the process of loan origination.

To further insure the performance of purchased loans, the mortgage market has developed the practice of requiring "Representations and Warranties" on purchased loans. These Reps and Warrants as they are called, are designed to insure that the loans sold meet the guidelines of the purchasers. This is because mortgage market participants have long recognized that there is

substantial risk in acquiring loans originated by someone else. An essential component in having valuable Reqs and Warrants is that the provider of those promises has sufficient capital to back up their obligations to repurchase loans subsequently determined to be inconsistent with the Reqs and Warrants. A financial guarantee from an insolvent provider has no value.

### Six Degrees of Separation

The current secondary market for non-agency mortgages, including sub prime mortgages has many participants and a great separation of the origination process from the investment process. Each participant has a specialized role. Specialization serves the market well, as it allows each function to be performed efficiently. Specialization, however also means that risk creation and risk taking are separated.



In simplified form the process can be described as involving:

- Borrowers**—who want a loan for home purchase or refinance
- Brokers**—who work with the borrowers and lenders to arrange the loan
- Mortgage Bankers**—who fund the loans and then sells the loans
- Aggregators**—(often a broker-dealer) who buy loans and then packages the loans into a securitization that are sold to investors.
- CDO Managers**—who buy portfolios of mortgage-backed securities for a trust that issues debt backed by those securities
- Investors**—who buy the CDO debt

Additional participants are also involved:

- Servicers**—who keep the loan documents and collect the payments from the borrower
- Rating Agencies**—that place a rating on the mortgage securities and on the CDO debt

**Investment Banks**—that act as underwriters and placement agents for the mortgage securities and the CDO debt.

This description is obviously a simplification of a more complex process. For example, CDOs were not the only purchasers of risk in the sub prime market. They were however a dominant player, with some estimating that they bought about 70% of the lower rated classes of sub prime mortgage securitizations. What is clear even from this simplified process is that the investor in the CDO bond has attenuated contact to the borrower. While six degrees of separation creates a smaller global community, it is not sufficiently close to insure a sound mortgage origination process.

### **When is a Door Not a Door?**

One of my favorite riddles from childhood is “When is a door not a door?” The answer is: “When it’s a jar (ajar).”

That is the problem with the current secondary market, especially for sub prime loans: no one is the gate keeper, shutting the door on uneconomic loans. Rather than conducting his/her own analysis, the ultimate CDO investor, to a large extent, placed trust in the first loss investor, the rating agencies and the CDO manager. In each case that trust was misplaced.

In the secondary market, mortgage transactions are generally structured so that someone at zero or one degree of separation would take the first slice of credit risk and thus insure that loans were originated properly. In the sub prime market, however it was possible to originate loans and sell them at such a high price, that even if the mortgage banker or aggregator retained a first loss piece (or residual) the transaction could be profitable even if the loans did not perform well. Furthermore, the terms of the residuals were set so that the owner of the residual might receive a substantial portion of their cash flows before the full extent of losses were known.

Rating agencies set criteria to establish credit enhancement levels that ultimately lead to ratings on bonds. The rating agencies generally rely on historical statistical analysis to set ratings. The rating agencies also generally rely on numeric descriptions of loans like loan-to-value ratios and debt-to-income ratios to make their determinations. Rating agencies generally do not review loan files or “re-underwrite” loans. Rating agencies also do not share in the economic costs of loan defaults. The rating agencies’ methodology allowed for the inclusion of loans of dubious quality into sub prime mortgage pools, including low documentation loans for borrowers with poor payment histories without the offsetting requirement of high down payments.

The rating agencies also established criteria for Collateralized Debt Obligations that allowed CDO managers to produce very highly leveraged portfolios of sub prime mortgage securities. The basic mechanism for this was a model that predicted that the performance of sub prime mortgage pools was not likely to be highly correlated. That is, defaults in one pool were not likely to occur at the same time as defaults in another pool. This assumption was at best optimistic and most likely just wrong.

In the CDO market the rating agencies have a unique position. In most of their other ratings business, a company or a transaction exists or is likely to occur and the rating agency reviews that company or transaction and establishes ratings. In the CDO market, the criteria of the rating agency determine whether or not the transaction will occur. Let me explain further. A CDO is like a financial institution. It buys assets and issues debt. If the rating agency establishes criteria that allow the institution to borrow money at a low enough rate or at high enough leverage, then the CDO can purchase assets more competitively than other financial institutions. If the CDO has a higher cost of debt or lower leverage, than it will be at a disadvantage to other buyers and will not be brought into existence. If the CDO is created, the rating agency is compensated for its ratings. If the CDO is not created, there is no compensation. My view is that there are very few institutions that can remain objective given such a compensation scheme.

CDO investors also relied upon the CDO manager to guide them in the dangerous waters of mortgage investing. Here again investors were not well served by the compensation scheme. In many cases CDO managers receive fees that are independent of the performance of the deals they manage. While CDO managers sometimes keep an equity interest in the transactions they manage, often the deals are structured in such a way that the equity of the deal can return the initial equity investment even if some of the bonds have losses. Moreover, many of the CDOs were managed by start-up firms with little or no capital at risk.

### **Willing Suspension of Disbelief**

CDO investors were not blind to the additional risks posed by CDO investing. CDOs generally provided higher yields than similarly rated bonds and it is an extremely naïve, and to my mind, rare, investor who thinks they get higher returns without incremental risk. It is not unusual, however, for investors not to realize the magnitude of additional risk they bear for a modest incremental return. Ultimately it is investors who will bear the losses and investors must bear the bulk of the burden in evaluating their investments. There were clear warning signs for several years as to the problems and risk of investing in sub prime mortgages. Nevertheless, investors continued to invest in this sector as the risks grew and reward decreased.

The mortgage market seems to be particularly susceptible to this problem. Over and over during the last few decades, investors have been enticed into mortgage investments that offered some extra yield in exchange for substantially greater risk. We have seen this with mortgages funded with short term debt, mortgages funded with long term, non-callable debt, interest-only bonds, inverse floaters, capped floaters, and now with sub prime mortgages and CDOs. In each case investors were willing to invest in bonds that would produce higher income if markets remained stable, but could produce substantial losses if market conditions changed. In each case there were investors who were willing to accept the puffery of Wall Street sales people over diligent analysis of risk and reward.

In almost all cases the same level of income could have been obtained at a lower risk level, but only if the investment were structured with the risk presented in a more transparent manner. For example, rather than buying mortgages funded with non callable debt, an investor could just sell options. However in many cases the investor might be prohibited from that strategy or

the more transparent strategy would be prohibited by management, regulators or other interested parties. Once investors close their eyes to the level of risk in an investment by choosing a form that obfuscates risk, market forces will work to increase risk of those instruments beyond the expectations of the investors.

### **Now What?**

As expressed herein, the primary problem facing the sub prime market is a failure of industrial organization. The key risk takers in the market, the CDO investors were too far from the origination process. Moreover, they probably didn't even realize the extent of their risk taking. At the origination end, without the discipline of a skeptical buyer, abuses grew. The buyer was not sufficiently concerned with the process of loan origination and the broker was not subject to sufficient constraints. Stories abound on the amount of fraud and predatory lending. The mortgage investor was like an absentee landlord. Without supervision and oversight, there is no constraint on an unscrupulous originator.

As the problems of the mortgage market are in industrial organization, the solutions must also reside there. To some extent markets are self correcting, but markets have surprisingly short memories and seemed to be easily fooled by structural innovations that obfuscate risk. Therefore, without some institutional changes, these problems are likely to reemerge.

Some have proposed greater regulation of mortgage origination practices such as limiting the types of loans allowed or establishing minimum underwriting requirements. However, solutions which address allowable loan types, underwriting requirements may be counter productive since they may limit the availability of credit to those who need it and deserve it. They lead to innovation focused on circumventing regulation rather than in providing credit. Also such regulations have the greatest impact on closely regulated institutions such as banks, which for the most part were not engaged in the egregious sub prime practices.

I believe regulatory action should be directed at reducing the separation between origination and investment. Capital is the key to this process. Fundamentally, there was too little capital at risk in key parts of the mortgage origination and investment chain.

### **Two Recommendations**

1. There needs to be capital at the origination end of the process. Without capital, representations and warranties have no value. To achieve this, brokers (or whoever has direct contact with the borrower) should be licensed and bonded and firms in the chain of reps and warrants need to maintain sufficient reserves to support their financial promises. This capital would also be available to assess damages in the case of fraudulent or predatory practices that hurt borrowers and homeowners.
2. There needs to be a constraint on the leverage of CDOs relative to other financial institutions. This can arise through regulation of rating agencies or through direct regulation of certain types of leveraged investment vehicles. The poor performance of structured finance CDOs (which are the sub prime CDOs) will likely lead to reduced investor interest for some time. However, CDOs continue to operate in other markets and are likely to return to the mortgage market in the future. Rating agencies whose fees are inversely proportional to the

strictness of their criteria should not become the *de facto* arbiter of leverage in the financial markets. Rating agencies could take the lead in this process by creating greater uniformity between ratings for institutions taking similar risks.

By adding capital to the key players in the mortgage chain, the capital markets would address many of the other problems that were created. Ultimately the mortgage market can only function properly when those who are involved in the process of mortgage origination are motivated to limit the risk of mortgage investments.



*The information contained in The Pipeline is believed to be reliable, but its accuracy and completeness are not guaranteed. All expressions of opinion are subject to change without notice. Pipeline is provided for informational purposes only and is not a solicitation, endorsement or a recommendation for purchase or sale of any particular security. An affiliate of Andrew Davidson & Co., Inc. engages in trading activities in securities that may be the same or similar to those discussed in this publication. All Rights Reserved.*