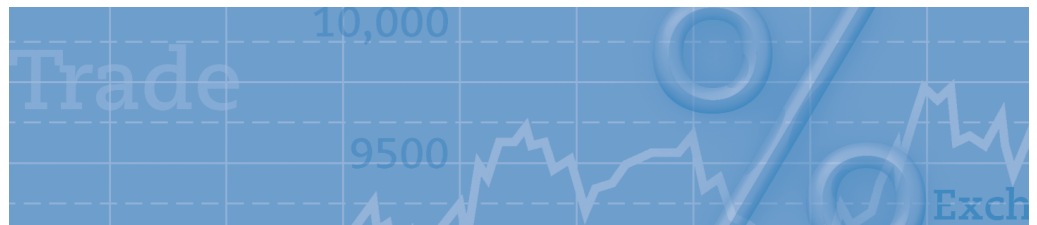


21 June 2007

The Subprime Meltdown: A Primer¹

Part I of A NERA Insights Series

By Dr. Faten Sabry and Dr. Thomas Schopflocher



Forthcoming topics in this subprime lending series will include:

- Finance & Accounting Aspects of a Securitization
- Anatomy of a Fraudulent Conveyance
- De-Mystifying the Economics of Complex Mortgage Transactions
- The Domino Effect: Economic Impact of When Exotic Mortgages Reset

Introduction

The subprime mortgage market consists of loans to borrowers with high credit risk, and the mechanisms that have evolved to originate, service, and finance those loans. While this market has existed since the early 1980s, it was not until the mid-1990s that the growth of the subprime industry gained significant momentum. A decade ago, five percent of mortgage loan originations were subprime; by 2005 the figure had jumped to approximately 20 percent.² Currently, there are about \$1.3 trillion in subprime loans outstanding,³ with over \$600 billion in new subprime loans

originated in 2006 alone.⁴ Figure 1 shows the growth of subprime originations over time.

Several factors contributed to the fast growth of the subprime market. Most importantly, there has been an increase in the rate of securitization. That is, many more mortgages are now repackaged as mortgage-backed securities (MBS) and sold to investors. Also, there have been various credit innovations and a proliferating range of mortgage products available to the subprime borrower. These factors increased liquidity, reduced costs of lending, and enabled a greater number of previously

¹ The authors thank Andrew Carron, Chudozie Okongwu, Erin McHugh, Tom Porter, and David Tabak for helpful comments and suggestions. Giang Nguyen, Kenneth Beehler, Max Egan, and Jen Wolinetz provided excellent research assistance.

² Testimony of Sandra F. Braunstein, Director, Division of Consumer and Community Affairs—Federal Reserve Board, on Sub-prime Mortgages, before the Subcommittee on Financial Institutions and Consumer Credit, Committee on Financial Services, US House of Representatives, March 27, 2007.

³ Testimony of Sheila C. Bair, Federal Deposit Insurance Corporation, on Subprime and Predatory Lending: New Regulatory Guidance, Current Market Conditions, and Effects on Regulated Institutions, before the Subcommittee on Financial Institutions and Consumer Credit of the Committee on Financial Services, US House of Representatives, March 27, 2007.

⁴ Testimony of Sandra L. Thompson, Director, Division of Supervision and Consumer Protection—Federal Deposit Insurance Corporation, Mortgage Market Turmoil: Causes and Consequences, before the Committee on Banking, Housing and Urban Affairs—US Senate, March 22, 2007.

unqualified borrowers to obtain loans. As of 2006, over 60 percent of all loans not eligible for prime rates were securitized.⁵

Several structural and economic factors have recently slowed subprime growth and increased delinquencies and foreclosures. Some of these factors include the rise in short-term interest rates and the decrease in the rate of home price appreciation (with actual price declines taking place in many locations). As a result of mounting defaults and delinquencies, one of the largest subprime lenders, New Century Financial Corporation, filed for bankruptcy on April 2, 2007. With the industry rapidly contracting, many other lenders have since followed suit, or simply exited the subprime market altogether. Consequently, many lenders, borrowers, and investors have filed lawsuits. While the subprime mortgage business is the focus of this primer, it is worth noting that this “meltdown” (as coined by the news media)⁶ is affecting all areas of subprime business, including automobile loans and credit card lending.

In this primer, we provide a brief description of the subprime mortgage industry and the process of securitization; we examine the economic factors leading to the deterioration of the US subprime mortgage industry; we identify some of the factors that differ between the current crisis and the 1998 crisis; and we discuss pending and potential

litigation issues arising from the current industry difficulties.

The Subprime Market

Subprime Borrowers

A subprime borrower is one who has a high debt-to-income ratio, an impaired or minimal credit history, or other characteristics that are correlated with a high probability of default relative to borrowers with good credit history. Because these borrowers are inherently riskier, subprime mortgages are originated at a premium above the prime mortgage rate offered to individuals with good credit. Until recently, the spread between the average prime and subprime rate has remained at approximately 200 basis points.⁷

A method developed by the Fair Isaac Company assigns borrowers a credit score, or FICO score, that lies between 300 and 850. This is a measure of the borrower’s likelihood of delinquency and default, where a lower score implies a greater risk to the lender. It is generally accepted that a FICO score less than 620 is considered subprime.⁸

In addition to having lower FICO scores, subprime borrowers typically have a loan-to-value ratio (LTV) in excess of 80 percent.⁹ A high LTV means that the borrower is making a smaller down-payment. So, the lender assumes more risk with these individuals because it will

be harder to recover the capital from the collateral if they default on their loans. This is especially the case when home price appreciation (HPA) is flat or negative.

Prepayment Penalties

A borrower may be required to pay a fee or penalty upon refinancing or paying off his mortgage ahead of schedule (called a prepayment). This mortgage feature, known as a prepayment penalty, is a prevalent feature of subprime loans.¹⁰ In the initial stages of a mortgage, the likelihood that a subprime borrower prepays in response to falling interest rates is higher than that for a prime borrower. Therefore, in order to mitigate prepayment risk, subprime lenders typically include prepayment penalties as part of the mortgage agreement. According to a 2006 study by the Federal Reserve Bank of St. Louis, the average duration of a prepayment penalty as of 2003 was between two and three years, depending on the type of mortgage product.¹¹

Subprime Loan Purpose

A loan can be for a home purchase, for refinancing an existing mortgage (popularly called a “refi”), or for refinancing an existing mortgage and simultaneously borrowing cash against the equity in the home (called a “cash-out refi” or simply a “cash-out”). In the case of the subprime industry, refis have been very popular in recent years. Because cash-out refis allow the mortgagor to tap into built-up equity in

⁵ Data from Inside Mortgage Finance Publishing, Inc.

⁶ Ray Hennessey, editor of SmartMoney.com, “Mortgage Meltdown,” March 14, 2007, <http://www.cbsnews.com/stories/2007/03/14/hennessey/main2571703.shtml> on May 18, 2007.

⁷ Souphala Chomsisengphet and Pennington-Cross, “The Evolution of the Subprime Mortgage Market,” Federal Reserve Bank of St. Louis *Review*, January/February 2006.

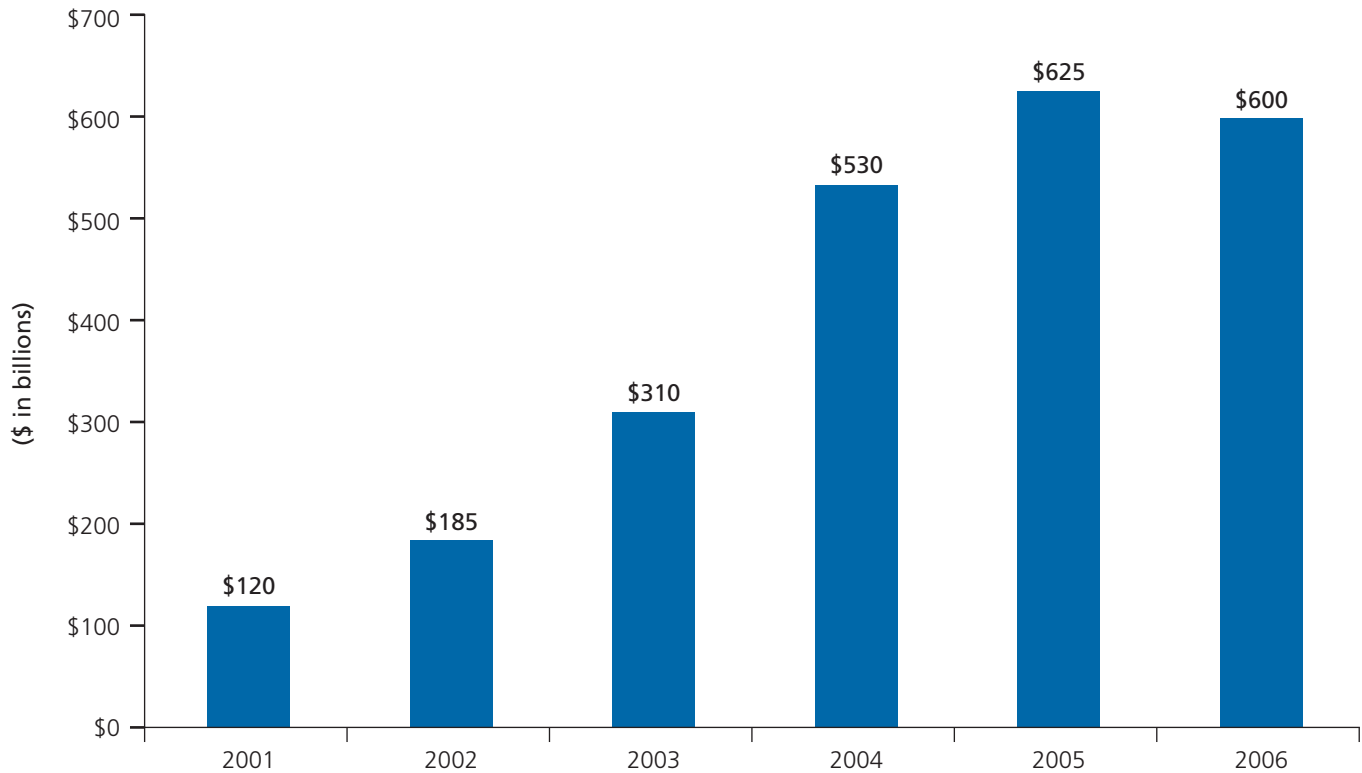
⁸ It is worth noting that credit scores alone do not guarantee eligibility for the prime mortgage rate. The category of borrowers referred to as Alt-A involves loans with higher credit scores—between 620 and the low 700s. However, even though their FICO scores are reasonably high, Alt-A borrowers do not qualify for prime mortgage rates. Usually, this is because they are unable to provide sufficient documentation to the originator.

⁹ Frank J. Fabozzi, *The Handbook of Mortgage-Backed Securities*, sixth ed., 2006, McGraw-Hill, p. 100.

¹⁰ Prepayment penalties are seen in prime loans, but they are rare.

¹¹ Souphala Chomsisengphet and Pennington-Cross, “The Evolution of the Subprime Mortgage Market,” Federal Reserve Bank of St. Louis *Review*, January/February 2006.

Figure 1. Total Subprime Originations



Source: Inside Mortgage Finance as presented in Sandra Thompson Testimony, March 22, 2007.

the property, the borrower is able to benefit directly from appreciation of home prices. An academic study shows that 60 percent of subprime borrowers refinance into another subprime loan.¹²

Types of Subprime Mortgages

Broadly speaking, there are two main types of mortgages that apply across all credit sectors in the US. The traditional fixed-rate mortgage (FRM) is defined by constant periodic payments as determined by a “note rate” (the rate the borrower pays) that is fixed at loan inception. By contrast, the adjustable-rate mortgage (ARM) is defined by variable periodic payments as

determined by an index, such as the 12-month LIBOR, plus a fixed margin. The frequency at which the ARM note rate adjusts is usually either monthly, semi-annually, or annually. Both these products typically have an amortization period of 30 years and a monthly payment frequency.

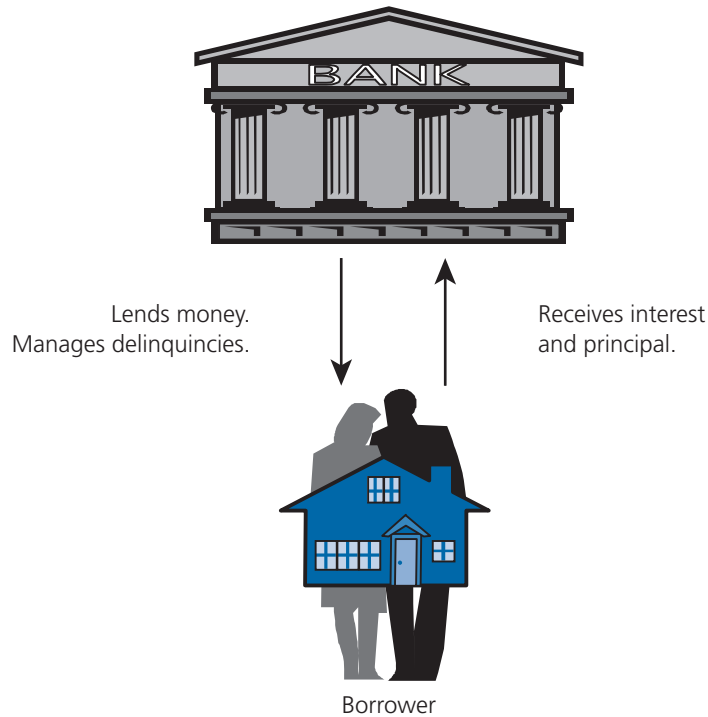
Many subprime loans are a hybrid of ARMs and FRMs in that they typically have a fixed note rate for the first two to three years and then revert to a classical ARM structure. For example, the 2/28 hybrid loan—a popular subprime product—has a fixed, low rate for the first two years (known as a teaser) and then becomes adjustable semiannually for

the next 28 years as the note rate resets to the value of an index plus a margin.

Other non-traditional products include negatively amortizing mortgages (NegAms) and interest-only mortgages (IOs). Negatively amortizing loans are FRMs or ARMs with payment schedules in which the borrower pays back less than the full amount of the interest to the lender, and the remainder is added to the principal. An IO mortgage can be either an ARM or an FRM such that the borrower pays only the interest for a set period of time. Once the IO period ends, the borrower has to pay down the principal in addition to the periodic interest. During the

¹² See M J Courchane, Brian Surette & Peter Zorn, “Subprime Borrowers: Mortgage Transitions and Outcomes,” *Journal of Real Estate Finance and Economics*, 29:4, 365-92 (2004). In the case of a cash-out refi, the reason is often to manage other forms of debt (credit card, for example).

Figure 2. Borrowing Under the Borrower-Lender Relationship without Securitization



period 2004-2006, approximately 45 percent of subprime mortgages were ARMs or hybrids, 25 percent were FRMs, 10 percent allowed for negative amortization, and 20 percent were IOs.¹³

The Securitization Process

Introduction

A mortgage used to be a simple relationship between a homeowner and a bank or savings institution. The bank would decide whether to grant and finance the loan, collect payments, restructure the loan, or foreclose in case of defaults. Figure 2 illustrates borrowing under the traditional borrower-lender relationship.

Today, it is standard practice to pool mortgages with similar characteristics and

package them into bonds that are subsequently sold to investors—a process known as securitization. This process involves many additional parties to the borrower and lender. In this section, we describe the process of securitization, introduce these additional parties, and discuss associated benefits and risks.

Description of the Process and Key Players

What is Securitization?

Securitization is the creation and issuance of debt securities whose payments of principal and interest derive from cash flows generated by separate pools of assets. In the case of mortgages, securitization is the process of turning pools of home loans into bonds, which are generically referred to as mort-

gage-backed securities (MBS). The purpose of securitization is to increase the volume of credit available to borrowers and improve the liquidity of the mortgage market.¹⁴

According to the Mortgage Bankers Association, there were nearly \$2.5 trillion in total mortgage originations in the US in 2006, of which \$1.9 trillion was securitized into MBS. About 25 percent of the MBS issued in 2006 were subprime loans.¹⁵ In 2006, 63 percent of all subprime and Alt-A loans were securitized.¹⁶

Agency vs. Non-Agency

The government-sponsored enterprises Fannie Mae, Freddie Mac, and Ginnie Mae (GSEs) significantly advanced the development of this secondary mortgage

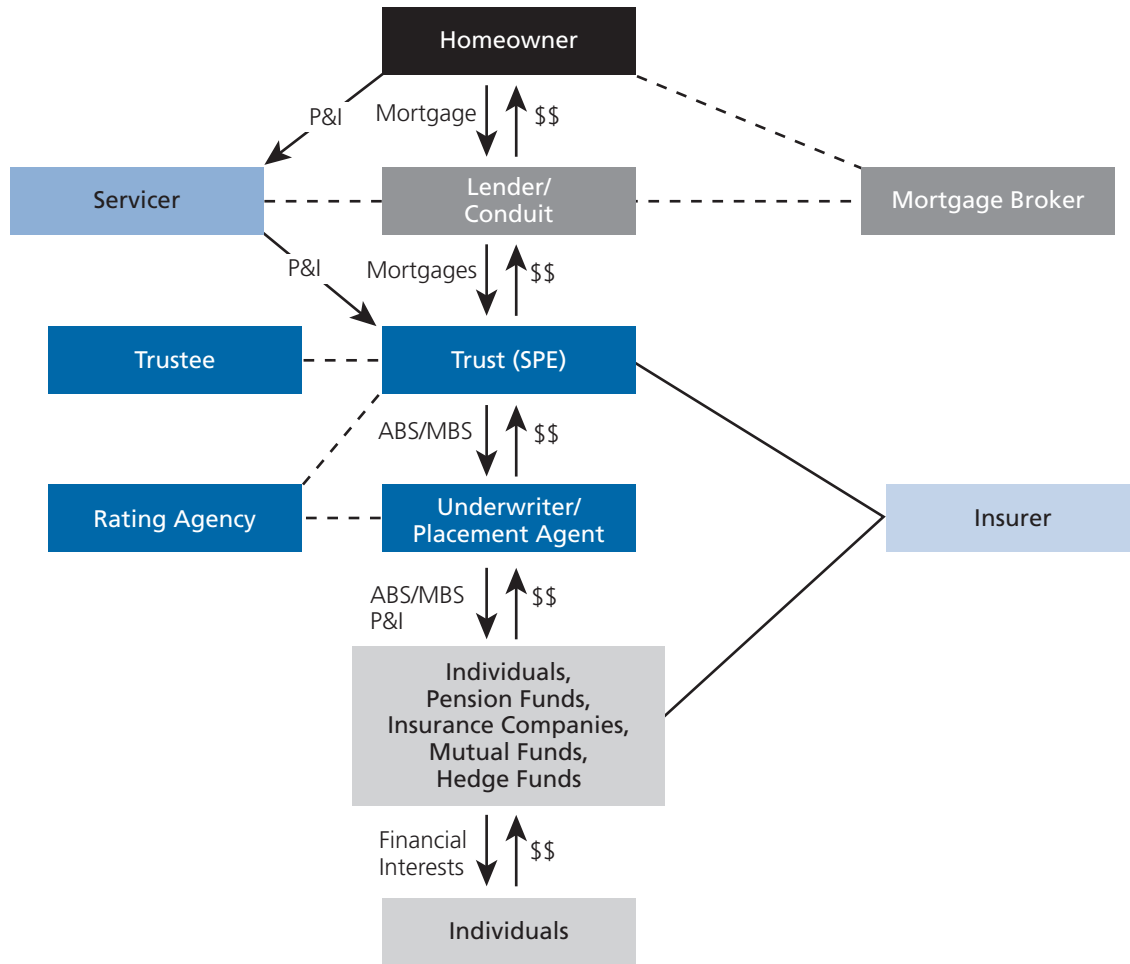
¹³ Yuliya Demyanyk and Yadav Gopalan, "Subprime ARMs: Popular Loans, Poor Performance," Federal Reserve Bank of St. Louis *Bridges*, Spring 2007, <http://stlouisfed.org/publications/br/2007/a/pages/2-article.html>

¹⁴ When bonds are backed by subprime collateral, it is industry convention to categorize them as residential asset-backed securities, or "residential ABS." This distinction is somewhat artificial, however; so, throughout this paper we will refer to all securities backed by mortgages as MBS.

¹⁵ Data from Inside Mortgage Finance Publishing, Inc.

¹⁶ Ibid.

Figure 3. Standard Securitization Structure



market by providing a mechanism for securitizing pools of mortgages and reselling them to investors. For the most part, the GSEs have dealt with prime mortgages that conform to a relatively narrow set of specifications and cater to borrowers with good credit and complete documentation. Mortgages that lie outside these parameters are usually issued and securitized by private-label (or “non-Agency”) companies. Broadly speaking, the three major sectors of the private-label industry are subprime, Alt-A, and Jumbo—the latter market serving borrowers with good credit

but requiring mortgages that exceed the Agency loan-size guidelines). Throughout the last decade, there has been tremendous growth in the private-label sector. As of the fourth quarter of 2006, 54 percent of the MBS market was non-Agency.¹⁷

Key Players

Figure 3 describes a representative securitization process. Note that it is not unusual for one party to play several roles. For example, the lender might also service the loans.

Lender/Originator

In the first stage of the securitization process, the borrower obtains a loan from the lender with or without the help of a mortgage broker. Note that about two-thirds of subprime mortgages are originated by mortgage brokers who market to prospective borrowers, assess borrower credit worthiness, and submit loan applications to mortgage lenders who fund the approved loans.¹⁸ Next, the lender/originator of loans usually creates a trust (and in some cases creates a new corporation to serve the same purpose) and sells to the

¹⁷ *The 2007 Mortgage Market Statistical Annual, Vol. II: The Secondary Market*, Bethesda: Inside Mortgage Finance Publications, Inc., 2007, p. 11.

¹⁸ Ellen Schloemer, Wei Li, Keith Ernst, and Kathleen Keest, “Losing Ground: Foreclosures in the Subprime Market and their Cost to Homeowners,” Center for Responsible Lending, December 2006.

trust all of its legal rights to receive payment on the mortgages. In this way, the trust becomes the owner of the loans. When a lender extends a loan or acquires another asset, such as a lease, it is creating assets that potentially can be securitized. Because they initiate the securitization chain, lenders are also called originators.

Over the years, many mortgage brokers and regional banks have come to specialize in specific types of mortgage originations. There are a number of originators who specialize exclusively in subprime loans. Some examples are New Century, First Franklin, and Option One. Many exclusively subprime originators have filed for bankruptcy.

The Trust Special Purpose Entity (SPE)

The trust is a bankruptcy-remote, special-purpose vehicle (a subsidiary of either the originator or an investment bank) that underwrites the securities. The trust structure is used because it is exempt from taxes, allows the originator to treat the transaction as a loan sale, and insulates investors from the liabilities of the originator and issuer. The trust controls the collateral, administers the collection of cash, and passes the interest and principal to the investors.

Servicers

The servicer is the entity responsible for collecting loan payments from borrowers and remitting these payments to the issuer for distribution to investors in exchange for a fee. The servicer is also responsible for handling delinquent loans and foreclosures. Because the servicer receives fees based on the volume of loans it services, the originator may choose to take on this role itself. It is also possible for some originators to contract out the servicing function to outside organizations, or to sell the servicing rights altogether.

Underwriters and Rating Agencies

The underwriter (or investment bank) buys the securities from the trust, resells the securities to investors, and then administers the issuance of the securities to investors. Credit agencies are involved in the securitization process because most securitized assets are rated, typically as double-A or triple-A.

Credit Enhancements and Credit Enhancement Providers

Because non-Agency pools of loans or collateral expose the investor to credit risk, some form of "credit enhancement" is required in order for subprime MBS to obtain specific credit ratings for individual bonds in a deal. Such enhancement mechanisms can come from unrelated parties, or be part of the deal structure itself. As such, they are referred to either as external or internal credit enhancements, respectively.

One of the oldest external mechanisms, now rarely used, is a bank *letter of credit*. This is a financial guarantee by the issuing bank stating that it promises to reimburse credit losses up to a predetermined amount. Another external enhancement is *bond insurance*. This is a guarantee from an insurance company that there will be timely payment of principal and interest in the event of default or foreclosure. Examples of such monoline insurers include: Ambac, FGIC, FSA, MBIA, and XL Capital Assurance.

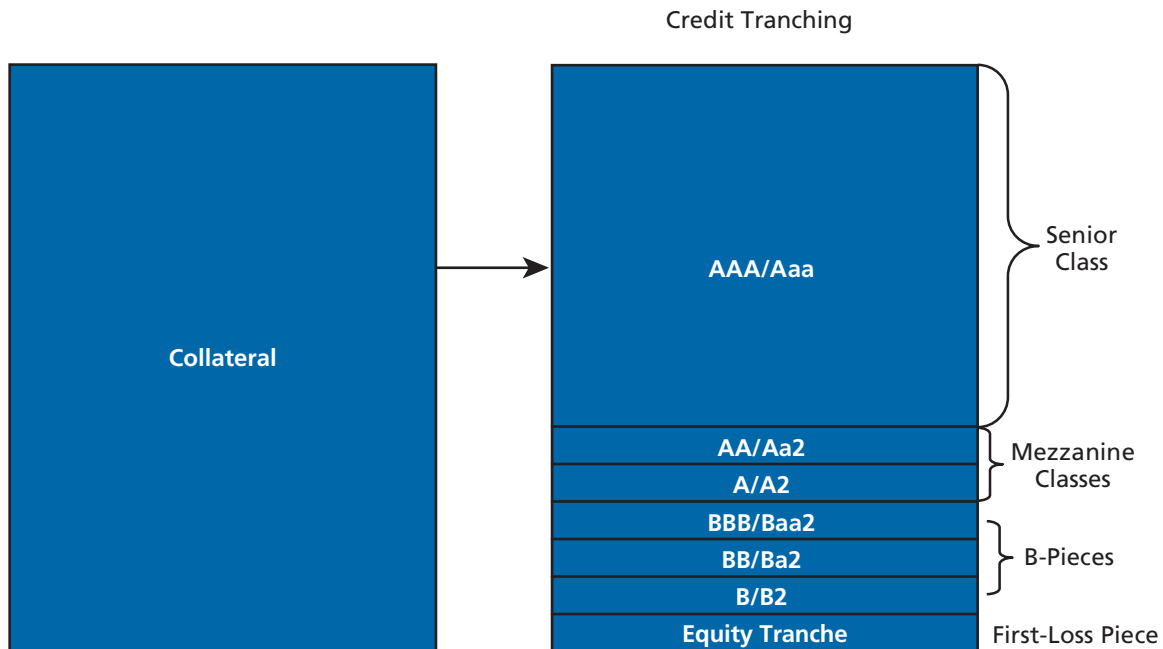
By far, the most common internal credit enhancement mechanism in the subprime world is the *senior/subordinate structure*. It is very common for subprime loan pools to be carved up into "tranches" such that cash flows from bonds will suit particular investor requirements. The idea is that the senior pieces are designed to get paid preferentially, while the subordinated tranches get paid only to the extent that the underlying collateral permits. Of course, as compensation, the so-called "B-pieces" offer a higher expected yield. This aspect of the

senior/subordinate credit enhancement is called "subordination."

When an MBS deal is structured, bonds of various levels of credit risk are created in order to generate cash-flow streams from borrowers to investors. Following a process known as credit tranching, the securitized loans are divided into different classes according to their level of risk. The top tranches are the triple-A and double-A rated bonds. Below these are the lower-rated classes. At the lowest level is the equity or "first-loss" tranche, which is usually not rated. See Figure 4 for an illustration. All parties involved in the securitization process understand that the most subordinated tranches have the highest likelihood of default and subsequent loss. Furthermore, the responsibilities of the loan servicer are documented and agreed to by the rating agencies, servicers, and investors. Through this credit-tranching process, it is possible for the senior pieces to obtain investment grade status, even though the underlying collateral is subprime debt. This is because the triple-A tranche is not backed by specific loans, only by a set of rules governing cash-flows from the loans. So, depending on the level of subordination (the percentage by principal of the deal that is designated as subordinate), the senior tranches are protected from losses up to a predetermined level. Such a set of rules is an example of a collateralized mortgage obligation, or CMO.

The two other ways that this structure enhances credit are "overcollateralization" and "excess spread." Overcollateralization involves providing more collateral than liability in a deal such that the subprime-backed bonds are able to withstand losses up to the amount of the surplus. An excess spread account involves allocating cash on a monthly basis after paying out interest and expenses. Because the amount in this

Figure 4. Schematic of MBS Structure



Source: "A Simple Guide to Subprime Mortgages, CDO and Securitization," Citibank analyst report, April 12, 2007.

account will build over time, it can be used to pay for potential losses in the future.

Investors

The largest investors in MBS securities are mutual funds, hedge funds, insurance companies, and pension funds. Note that regulated investors such as life insurance companies and pension funds are limited as to how much they can invest in any securities that are not investment grade.

Risks to the Various Parties

Lenders

Lenders such as New Century either keep loans on their books or sell them. Typically, when pools of subprime mortgages are sold, they come with a limited guaranty, or "repurchase agreement" that obliges the lenders to buy back loans whose default rates have exceeded a specified threshold. Lenders are expected to set up loan repurchase reserves to meet any potential repurchase requirements. In periods of low interest rates and rising value of houses, the

repurchase agreement is rarely exercised. However, as rates rise and home price appreciation slows, defaults can be expected to accelerate, leaving lenders faced with buy-back demands. If lenders are not properly reserved in this situation, they may be forced into bankruptcy if they cannot meet their loan repurchase requirements.

Investors

The primary risk in the subprime world relates to credit quality. When interest rates rise and the economy slows, subprime borrowers are more likely to default than prime borrowers. Investors holding the equity tranche will experience the first losses, followed by holders of the B-pieces and other subordinated tranches. Holders of the investment grade bonds should largely be insulated from losses. Nevertheless, if and when the rating agencies downgrade the bonds, investors will be faced with having to sell at lower prices. This is especially problematic for insurance companies and pension funds, which are

regulated and restricted as to the extent of their non-investment grade holdings.

One of the features that make MBS hard to value is the borrower's right to prepay any or all the outstanding principal ahead of schedule, which is true for prime or subprime loans. Effectively, this amounts to the borrower being long a call option on the mortgage. Because borrowers are inclined to prepay as prevailing interest rates decline, the MBS investor gets his money back in an environment where alternative fixed-income investment options are not that attractive. Conversely, when interest rates rise, the homeowner will be less inclined to refinance his mortgage, leaving the investor stuck with a fixed-income investment that pays less than the prevailing rates. This feature of MBS bonds is referred to as "negative convexity."

Although negative convexity still plays a role in the subprime world, subprime borrowers are typically faced with prepay-

ment penalties that serve as a disincentive to refinance when interest rates decline. Therefore, prepayment risk is more of a problem for prime rather than subprime lenders and investors.

What Caused the Current Subprime Problems?

Some may point out that the current subprime problems are nothing new and that a similar crisis took place in the late 1990s, where almost all subprime lenders went bankrupt or were bought out by larger companies. While some of the symptoms, like elevated delinquencies and defaults, are similar, the underlying problems have different causes than those of the crisis of 1998.

The 1998 Crisis

The late 1990s witnessed significant credit deterioration in several financial sectors. It was caused by credit concerns from the Russian debt crisis and the subsequent fallout from the failure of Long Term Capital Management (LTCM). Turmoil in the global capital markets, caused in large part by a debt default in Russia, led to a marked decline in investors' willingness to assume risk. This was expressed by an increase in the price of "risk free" US Treasury Securities relative to other credit products (the so-called "flight to quality") as well as by a lack of demand for certain classes of debt securities, including securitized subprime mortgages, that were perceived as risky.

Market reaction to Russia's actions was swift and severe. Credit and swap spreads—indicators of the premium demanded by the market to assume credit risk—increased sharply. This was due, in part, to actions of the Federal Open Market Committee of the Federal Reserve Board which, in the

face of a severe market crisis and potentially systemic risk for the world economy, cut the target Fed funds interest rate by 75 basis points (from 5.50 percent to 4.75 percent) between September 29 and November 17, 1998.¹⁹ The widening of credit and swap spreads was also driven by investors as they sold all but the very safest securities, and reevaluated and re-priced risks in general, and credit risks in particular.

The 1998 financial crisis had two effects of particular relevance on the subprime mortgage sector at the time. First, the sharply lower interest rates—and commensurately higher market prices—on US Treasuries set in motion a chain of events that caused the rates of return on all mortgage securities to lag behind other bonds. Lower Treasury yields led to a decline in mortgage interest rates that encouraged many borrowers to refinance their existing higher-rate mortgage loans. The resulting surge in mortgage refinancing boosted prepayment rates. When prepayments increase, the average maturity of a mortgage security decreases. The market prices of fixed income securities with shorter maturities are less sensitive to changes in market interest rates than are securities with longer maturities. Long Term Capital Management and other hedge funds held large quantities of MBS that they hedged by selling short Treasury securities with long maturities. The values of these short Treasury positions declined sharply as Treasury prices rose, but the anticipated offsetting increase in MBS prices did not occur, because higher prepayment expectations had taken away most of the interest rate sensitivity of the MBS. These hedge funds were forced to liquidate large holdings of MBS, further depressing MBS prices and thereby exacerbating the situation.

Second, the aversion of investors to all risky securities, as demonstrated both by the wide credit spreads and the lack of new issuances, led the market to reduce its estimate of the profitability of the subprime sector as a whole. Investors demanded a greater yield premium for subprime securities relative to prime securities, thereby further depressing the prices of subprime MBS.

Subprime lenders were adversely affected by both of these factors. Much of their capital base consisted of the rights to future excess cash flows on subprime loans they had previously securitized. The rise in prepayments meant that much of that future cash flow would not occur, forcing the lenders to take writedowns on their portfolios. The relative decline in subprime MBS prices meant that lenders had losses on loans already in the pipeline and a less competitive product to offer prospective borrowers. As a result of this crisis, many lenders went bankrupt in the late 1990s and there was a massive consolidation of lenders and issuers. While the outcome of the current crisis is not yet apparent, the causes are clearly different.

Current Subprime Difficulties

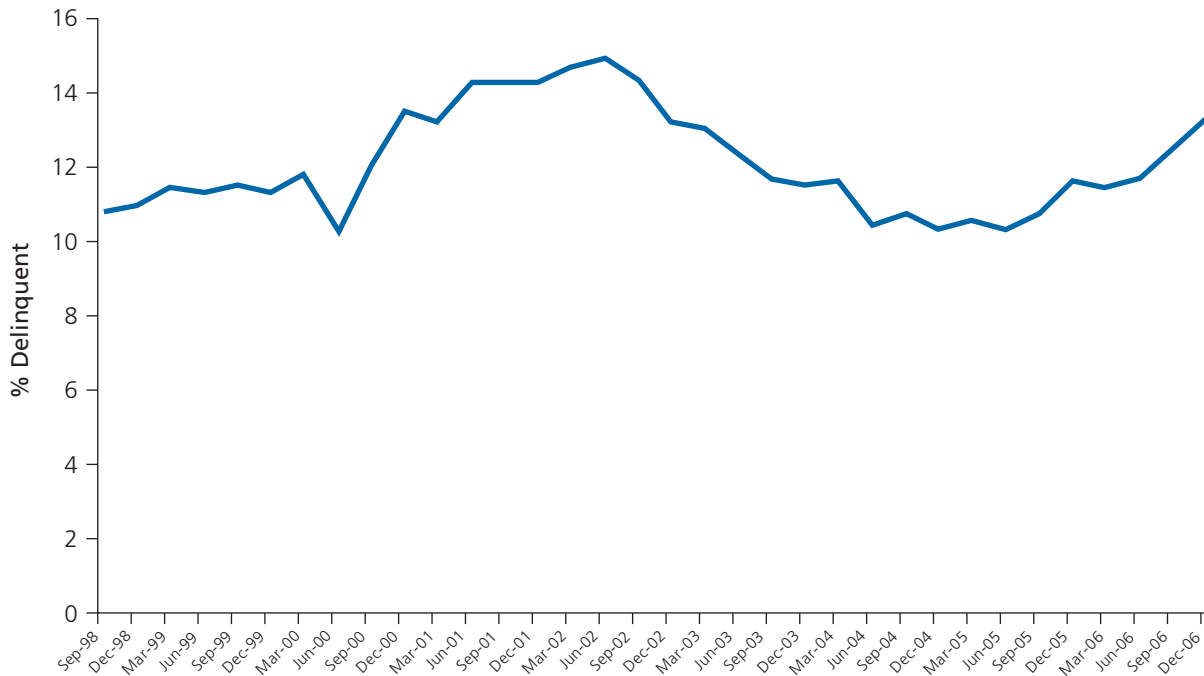
The current subprime difficulties are a result of industry trends along with a change in the economic environment that has led to an increase in delinquencies in the subprime mortgage market. Figure 5 shows subprime delinquencies over time. While these delinquencies remain below the previous cyclical peaks of 2002, the delinquency rate of subprime loans originated in 2006 is poised to surpass previous highs.²⁰

Several economic and financial factors contributed to the current crisis. According

¹⁹ Federal Reserve Bank of New York, <http://newyorkfed.org/markets/statistics/dlyrates/fedrate.html>, updated 10/6/2005.

²⁰ *Assessing Global Financial Risks*. Chapter 1: "Deterioration in the US Subprime Mortgage Market—What are the Spillover Risks?" IMF World Economic and Financial Surveys, April 2007.

Figure 5. Subprime Loan Delinquencies



Source: Bloomberg, LP

to a study by the IMF,²¹ part of the deterioration of subprime collateral can be attributed to “adverse trends in employment and income in specific states.” However, this is only part of the story. Other important contributors to the crisis include the increase in short-term interest rates (the Fed began raising the overnight lending rate in June 2004²²) and the cooling of the housing market in 2006. Prior to that time, several years of growth in the housing market meant that even when a subprime borrower’s personal finances were stressed, the increase in home values provided the option to refinance or even sell instead of going into delinquency. Figure 6 shows the recent decline in HPA. Since their peaks in

the summer of 2005, sales of both new and existing homes have dropped sharply, and the inventory of unsold homes has risen substantially. Also, single-family housing starts fell by roughly one-third since the beginning of 2006.²³

The nature of subprime products intensified the effects of the recent housing slowdown. About 80 percent of subprime loans originated in 2005 were ARMs, with the 2/28 making up 75 percent of these mortgages.²⁴ Once the low introductory teaser expires, the rate “resets” and becomes linked to an index. At this point, the monthly payments are almost certain to go up. The extent to which the borrower expe-

periences this payment shock depends on the level of short-term interest rates upon reset. Therefore, any upward movement in rates or stagnation in home prices will subject the borrower to increased payment shock, and hence, elevated likelihood of default. As the housing market slowed and subprime borrowers faced higher rates, many were unable to refinance and had no option but to default on their loans.

A commonly cited cause for the weakening of subprime collateral is a supposed relaxation of underwriting standards.²⁵ Fed Chairman Bernanke has emphasized the importance of underwriting standards in recent statements on subprime difficulties.

²¹ Ibid.

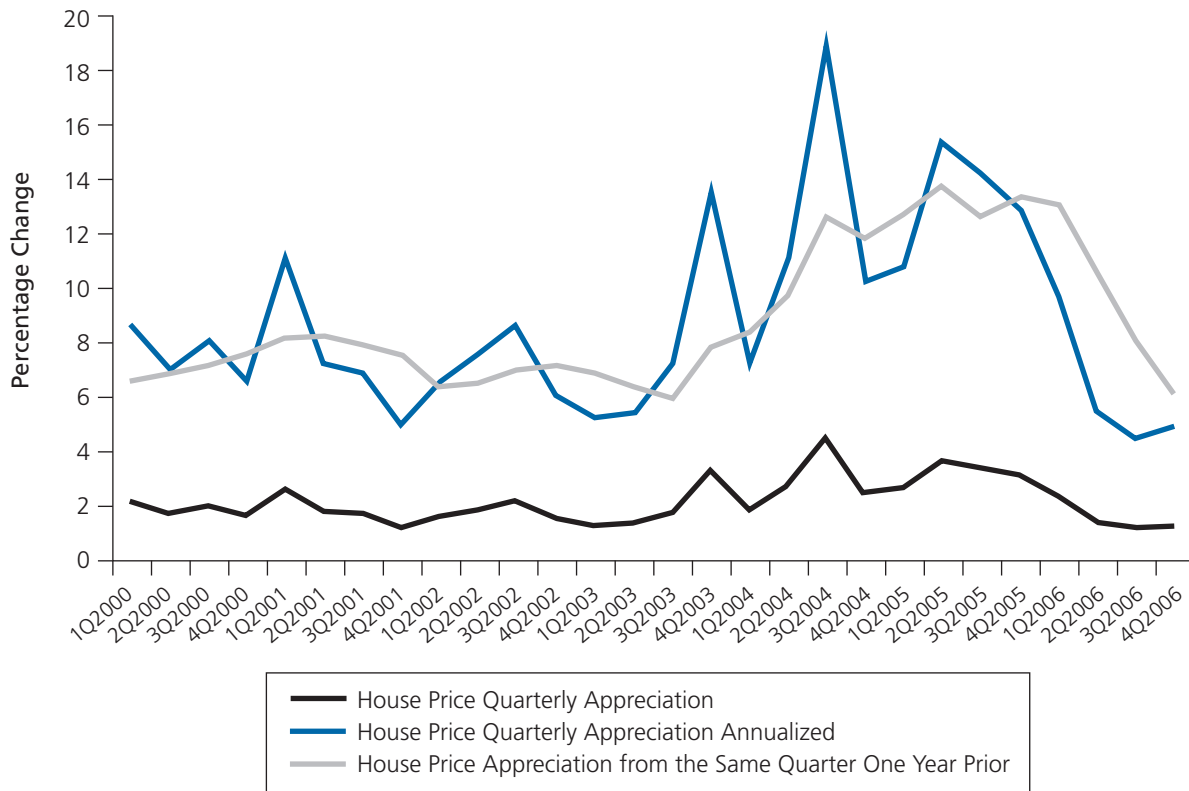
²² Federal Reserve Bank of New York, <http://newyorkfed.org/markets/statistics/dlyrates/fedrate.html>, updated 10/6/2005.

²³ Remarks by Chairman Ben S. Bernanke at the Federal Reserve Bank of Chicago’s 43rd Annual Conference on Bank Structure and Competition, Chicago, Illinois, May 17, 2007, <http://www.federalreserve.gov/BoardDocs/Speeches/2007/20070517/default.htm>

²⁴ Michael Youngblood, “Explaining the Higher Default Rates of the 2005 Origination Year,” *The MarketPulse*, June 2006.

²⁵ Ellen Schloemer, Wei Li, Keith Ernst and Kathleen Keest, “Losing Ground: Foreclosures in the Subprime Market and their Cost to Homeowners,” Center for Responsible Lending, December 2006.

Figure 6. Home Price Appreciation, Conventional Mortgage Home Price Index, 1Q2000–4Q2006



Source: Office of the Chief Economist, Freddie Mac. Index based on single unit, residential mortgages purchased or securitized by Freddie Mac or Fannie Mae since January 1975.

Mr. Bernanke noted that “[t]he accuracy of much of the information on which the underwriting was based is also open to question. Mortgage applications with little documentation were vulnerable to misrepresentation or overestimation of repayment capacity by both lenders and borrowers, perhaps with the expectation that rising house prices would come to the rescue of otherwise unsound loans. Some borrowers may have been misled about the feasibility of paying back their mortgages, and others may simply have not understood the sometimes complex terms of the contracts they signed.”²⁶

According to a study by the Center for Responsible Lending, “Low-doc and no-doc loans originally were intended for use with the limited category of borrowers who are self-employed or whose incomes are otherwise legitimately not reported on a W-2 tax form, but lenders have increasingly used these loans to obscure violations of sound underwriting practices.”²⁷

A recent *New York Times* article described a popular software product that facilitates automatic underwriting. There, it is stated that up to 40 percent of all subprime loans employ automatic screening techniques.²⁸

The incentive is clear: such software enables mortgage brokers to increase their rate of origination dramatically. Notwithstanding these hypotheses, however, the actual causes of rising subprime delinquencies have yet to be determined.

Litigation Potential

Since the start of the current subprime crisis, many lenders have filed for bankruptcy and several lawsuits have been filed. Figure 7 shows the list of companies that filed for Chapter 11 or have closed since mid-2006.

²⁶ Remarks by Chairman Ben S. Bernanke at the Federal Reserve Bank of Chicago’s 43rd Annual Conference on Bank Structure and Competition, Chicago, Illinois, May 17, 2007 <http://www.federalreserve.gov/BoardDocs/Speeches/2007/20070517/default.htm>

²⁷ Ellen Schloemer, Wei Li, Keith Ernst and Kathleen Keest, “Losing Ground: Foreclosures in the Subprime Market and their Cost to Homeowners,” Center for Responsible Lending, December 2006.

²⁸ Lynnley Browning, “The Subprime Loan Machine,” *The New York Times*, March 26, 2007.

Figure 7. Partial List of Bankrupt, Closed, or Acquired Subprime Lenders as of May 2007

Company	Headquarter	Status	Date
<i>Bankrupt lenders:</i>			
SouthStar Funding	Atlanta, GA	Bankrupt (Chapter 7)	April 11, 2007
New Century Financial	Irvine, CA	Bankrupt (Chapter 11)	April 2, 2007
People's Choice	Irvine, CA	Bankrupt (Chapter 11)	March 20, 2007
ResMae Mortgage Corp.	Brea, CA	Bankrupt (Chapter 11)	February 12, 2007
Mortgage Lenders Network USA	Middletown, CT	Bankrupt (Chapter 11)	February 5, 2007
Ownit Mortgage Solutions	Agoura Hills, CA	Bankrupt (Chapter 11)	December 2006
<i>Lenders that have closed or been acquired:</i>			
Option One Mortgage	Irvine, CA	Sold to affiliate of Cerberus Capital Management	April 20, 2007
EquiFirst Corp.	Charlotte, NC	Sold to Barclays	April 2, 2007
Fieldstone Mortgage	Columbia, MD	To be acquired by C-BASS	April 2007
Rose Mortgage	Parsippany, NJ	Closed	April 2007
Investaid Corp.	Southfield, MI	Closed	March 2007
Popular Financial Holding	Marlton, NJ	Closed	March 2007
ECC Capital Corp.	Irvine, CA	Acquired by Bear Stearns	February 12, 2007
Lenders Direct Capital	Lake Forest, CA	Closed wholesale operation	February 2007
Secured Funding	Costa Mesa, CA	Closed wholesale operation	January 2007
Bay Capital	Owings Mills, MD	Closed	January 2007
Champion Mortgage	Parsippany, NJ	Sold to Nationstar Mortgage	January 2007
Harbourton Mortgage	Santa Rosa, CA	Closed	December 20, 2006
Sebring Capital Partners	Carrollton, TX	Closed	December 2006
First Financial Equities	Teaneck, NJ	Closed	December 2006
Centex Home Equity	Dallas, TX	Sold to Fortress	July 2006
<i>Lenders actively seeking to sell:</i>			
Ameriquest/Argent Mortgage	Orange, CA	Actively seeking to sell	
Accredited Home Lenders	San Diego, CA	Actively seeking to sell	
First NLC Financial	Deerfield Beach, FL	Actively seeking to sell	
NovaStar Financial Inc.	Kansas City, MO	Seeking to sell	
Fremont Investment & Loan	Santa Monica, CA	Seeking to sell	

Sources: Factiva, The Mortgage Graveyard (www.mortgagedaily.com)

Examples of recent lawsuits include:

- A class action lawsuit against NovaStar Financial in 2007 related to a yield spread premium fee.²⁹
- Various breach-of-contract cases against New Century, Sunset Direct Lending, and others, calling for subprime lenders to buy back their loans.
- Class action lawsuits against other lenders claiming reckless projections and false and misleading statements.³⁰

See Figure 8 for a list of some of recent subprime-related lawsuits.

Some examples of potential areas of litigation include the following:

Homeowners' lawsuits versus conduits and underwriters. As a result of foreclosures, such cases will involve accusations of predatory lending. That is, homeowners—presumably in a class-action setting—will file lawsuits alleging that mortgage products

were ill-suited to their needs. Claims will emphasize the complexity of the mortgage terms, as well as the impact of rate reset and subsequent payment shock. Examples of this type of lawsuits include *Thomas Hilchey and Robin Crevier vs. Ameriquest*. The suit alleges that the lender failed to provide documents and disclosures, leading the plaintiffs to take out the loan, only to face a payment shock two years later when the “teaser” period ended.³¹

²⁹ Yield spread premium (YSP) fees are cash rebates that a broker receives for initiating a loan at an interest rate above what the client would otherwise qualify for. Depending on the spread above par, the lender pays the broker a percentage of the loan amount.

³⁰ “Exploring the Future Trends of Novastar Financial Inc.,” M2 PressWIRE, April 10, 2007; Bailey Somers, “Preferred Shareholders File Suit Against New Century,” *Financial Services Law* 360, April 5, 2007; “Lawsuit Against First Franklin Financial Corp, a Subprime Lender, Alleges Violations of Fair Business Practices Act, Says Plaintiff, Allison Morris,” ENP Newswire, April 4, 2007; Edvard Petterson, “Credit Suisse Unit Sues Subprime Mortgage Lender,” *The Washington Post*, March 31, 2007.

³¹ Jason Szep, “As US subprime crisis deepens, some fight back,” Reuters, March 16, 2007.

Conduits' lawsuits versus the banks.

Since conduits are unable to do business without capital, many have been forced to file bankruptcy when they were asked to buy back loans. It is likely that there will be claims of improper margin calls and flawed valuation of underlying collateral on the part of banks and other institutions that purchased or financed the loans.

Shareholders' lawsuits versus conduits, accountants, trustees, and underwriters.

The subprime lenders that went bankrupt will face extensive accusations. Shareholders will make claims of misrepresentation and omission related to accounting for residuals, as well as claims of bad valuation and poor underwriting standards. There have been several class action lawsuits against subprime lenders such as New Century, NovaStar Financial, and Accredited Home Lenders Holdings, Inc. in the last few months, alleging violations of Section 10(b) and 20(a), and rule 10b-5 by issuing false and misleading statements. Figure 8 provides a more detailed listing of these lawsuits.

Insurers' lawsuits versus conduits.

Large insurance claims on failed subprime collateral will lead to accusations of poor underwriting (misrepresentations and omissions) on the part of conduits.

Investors' lawsuits versus trustees.

To the extent that bondholders do not get paid, there will be claims of breach of fiduciary duty on the part of the trustees responsible for the distribution of cash-flow.

Trustees' lawsuits versus conduits and underwriters on behalf of investors.

Trustees will seek damages from conduits

and underwriters. The claims will be along the lines of fraudulent conveyance and breach of contract related to loan servicing.

Individual investors' lawsuits. If and when the investors of MBS post poor returns as a result of failing subprime-backed investments, the individual investors will accuse the funds of not taking on suitable and prudent investments, and failing to follow investment guidelines and standard risk management procedures. There will also be claims of misrepresentations, omissions, bad pricing, and mark-ups. Recently, a retiree filed suit against Fremont General Corp, alleging imprudent investment and seeking class action status to reclaim funds lost from a drop in Fremont's share price.³²

Conclusion

In summary, an increasing number of borrowers with weak credit and sparse documentation have qualified for mortgages as a result of the proliferating range of mortgage products and other credit market innovations. This explains part of the significant increase in subprime originations over the last decade. However, the recent slowdown in the housing sector, the increase in short-term interest rates, and ubiquitous prepayment penalties left many subprime borrowers with no option but to default on their mortgage payments. As delinquencies and foreclosures increased beyond expected levels, many lenders ended up filing for Chapter 11 or stopped originating subprime loans as they were unable to meet their loan buyback obligations. Furthermore, investors may face losses if rating agencies start downgrading the mortgage-backed securities.

³² Joel Rosenblatt, "Fremont General Sued Over Purchases of Stock for Pension Funds," Bloomberg, April 26, 2007, <http://www.bloomberg.com/apps/news?pid=20601103&sid=aiQhw8RFhwxs&refer=news>

Figure 8. Subprime Lawsuits to Date as of May 2007

Lawsuits	Date
<i>Shareholders vs. Lender for violation of securities laws:</i>	
Class actions against New Century	February 9, 2007
Class actions against NovaStar Financial	February 9, 2007
Class actions against Accredited Home Lenders Holdings, Inc.	March 19, 2007
Class action against Beazer Homes USA Inc.	March 29, 2007
<i>Issuer/Underwriter vs. Lender for failure to buy back loans:</i>	
HSBC against various subprime lenders	March 13, 2007
DLJ Mortgage Capital, a unit of Credit Suisse, vs. Sunset Direct Lending	February 27, 2007
DLJ Mortgage Capital, a unit of Credit Suisse, vs. NetBank	March 30, 2007
DLJ Mortgage Capital, a unit of Credit Suisse, vs. Infinity Home Mortgages	March 30, 2007
UBS Real Estate Securities vs. New Century Financial	April 5, 2007
<i>MBS Investors vs. Issuer/Underwriter:</i>	
Class action against Bear Stearns, JPM, Credit Suisse, and Morgan Stanley for negligence	April 11, 2007
Bankers Life Insurance Co. v. Credit Suisse, seeking to recover losses on bonds	April 27, 2007
<i>Borrower vs. Lender:</i>	
Class action against Wells Fargo Financial, Inc. for failure to advise borrowers adequately	December 2003
Thomas Hilchey & Robin Crevier vs. Ameriquest for deceit and negligent misrepresentation	March 16, 2007
Leon L. Morris and Allison S. Morris vs. First Franklin Corp., a subsidiary of Merrill Lynch	April 4, 2007
Class action lawsuit against NovaStar Financial for controversial yield spread premium fee	April 10, 2007
Class action against Ameriquest for aggressive marketing and sale of risky mortgages	April 20, 2007
<i>State vs. Lender for violation of State laws:</i>	
Ohio State Attorney General vs. New Century	March 15, 2007
<i>Individual Investors vs. Funds and Insurance Companies:</i>	
McCoy vs. Fremont General Corp for making imprudent investment for pension plan	April 26, 2007

Sources: Factiva, Bloomberg, MortgageDaily.com

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