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# A Credit Crisis Primer

## Discussing the Nuts and Bolts of Current Events with Your Clients

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October 6, 2008 – The events since the weekend of September 14, 2008, when the implosion of Lehman Brothers took us all by surprise, have been nothing short of earthshaking for investors and their portfolios. But unlike past financial market shocks, such as the failure of Enron, for example, the credit crisis is not easy to understand and to explain to a client. Why should a rise in mortgage delinquencies lead to a major insurance company being bailed out by the government? And why would the implosion of a major investment bank threaten a run on the nation's money market mutual funds? And just what is a "credit default swap" anyway?

You are not alone in asking these questions. Nor are you alone in your struggle to try to explain these matters to clients that look to you for advice. The research team at Genworth Financial Wealth Management thought this brief overview of how the current credit crunch came to pass, with a particular emphasis on how otherwise disparate events are so interconnected, would help you speak to your clients. We have also included a glossary of key terms and concepts.

**Ground Zero: How are Sub-Prime Loans Connected to the Crisis?**

So what is a "subprime" loan? There is no official industry definition, and every lender has its own terms. Some lenders focus their definition on the terms of the loan itself (higher loan-to-value ratios, illiquid or limited collateral), while others focus on the borrower (low income or poorly documented income, poor credit score, high debt-to-income ratio).

Lenders have generally coalesced over the last 15 years to a set of three categories, in increasing order of riskiness: Prime loans, which are well collateralized and made to high quality borrowers capable of documenting their ability to pay; Alternative loans, in which the lender is believed to be a prime borrower but lacks traditional documentation; and Subprime loans, in which the borrower is known to be a weaker credit risk.

For a variety of reasons discussed later in this paper (securitization, low interest rates, the housing bubble, etc) the growth of subprime loans skyrocketed starting in the mid-1990's. In 1994, subprime mortgages were only 5% of all new mortgages originated that year. By the end of the century (1999) that ratio had climbed to 13%, and by the peak of the subprime expansion nearly 20% of all mortgages being originated in the United States were subprime loans made to subprime borrowers.

**Securitization: Spreading Risk Away From Lenders and Towards Investors**

If subprime mortgages had stayed as assets on the balance sheets of the organizations that issued them, the problems caused by the eventually high levels of subprime defaults might have been confined to just those lending organizations (such as Countrywide) that specialized in making subprime loans[1]. Unfortunately that was not the case. The process of "securitization" helped ensure that when subprime mortgages started to implode, the pain was felt far and wide. Thus while Countrywide did in fact implode, so too did a number of organizations not directly in the subprime origination business.

Exactly what is securitization? Securitization is the act of bundling together a series of assets (such as mortgage loans) into a pool and then selling shares of that pool to other investors. Ownership of a share of the pool of mortgages entitles the owner to a share of the payments made by all of the mortgage-holders with mortgages in the pool. A typical pool might consist of, say, 500 mortgages, each $500,000 in principal value, of a similar credit quality (credit score) with the same mortgage rate being paid by each homeowner. This $250 million pool is then sold in pieces (perhaps as low as $25,000 increments) to investors, both individual and institutional, as a type of fixed income instrument (a bond) known as a Mortgage Backed Security, or MBS.

Just how big is this market? According to the Bond Market Association, the mortgage backed securities (MBS) market is in excess of $6 trillion in total value of all instruments trading. Put another way, the MBS market grew larger than the market for all US Treasury securities back in 2000. And it should be noted that mortgages aren't the only types of loans that can be securitized. Auto loans, credit card receivables and other forms of loans can equally be sold away from bank balance sheets and repackaged into loan pools. When loans on assets other than mortgages are pooled and repackaged for sale, they are referred to as Asset-Backed Securities (ABS).

[1] And indeed, the problem would have been highly localized – by 2003 the top 25 subprime lenders were originating more than 90% of new subprime loans.

But how did the process of securitization, which has been a mainstay of bond markets since the 1970's, contribute to the subprime crisis? This is an extremely complex question, requiring more discussion than we have room for here. Suffice it to say that securitization aggravated the subprime crisis in two ways: first, securitization was extended to the subprime market starting in 1997, as the popularity of subprime lending was taking off. This began the spread of the risk of subprime lending out to investors well beyond the firms that specialize in originating subprime loans. Secondly, the securitization market began to favor a model that came to be known as "originate to distribute," whereby lenders originated loans with the intent to securitize them immediately, rather than after the loans had become "seasoned" on the lender's books. This model was particularly popular for subprime lending, since it was an easy way to reduce the lending risk faced by the lender. In 2001, 54% of all subprime loans were securitized, and by 2006 this percentage had risen to 75%.[2]

**MBS vs. ABCP: Impacting Every Investor, both Short-Term and Long-Term**

The repackaging of mortgage loans into Mortgage-Backed Securities helped spread the risks inherent in subprime lending away from the lenders themselves and onto the balance sheets of other investors. But most investors in MBS have a longer-term horizon suitable to the longer-term nature of MBS securities.[3] In theory, spreading the risks of subprime loans away from the concentrated group of specialty lenders and out to the wider pool of long-term investors who could better manage the risk should have been a risk reducing event. Even if the MBS market suddenly lost its liquidity, many of the holders of MBS's should have been able to maintain a "buy-and-hold" position in their MBS holdings, waiting out the hopefully temporary lack of market liquidity.

It was not the invention of the MBS that aggravated the current credit crisis, nor was it especially the growth of subprime MBS, although the latter was certainly a contributing factor. A particular pooled security known as "Asset-Backed Commercial Paper" (ABCP) was far more problematic. In July/August 2007, when subprime concerns dried up the liquidity in the MBS market the ABCP market became a permanent casualty of the subprime expansion and foreshadowed the credit crisis of 2008.

[2] Note that in fact this is not an especially high rate when compared to prime loans. Indeed, all loans guaranteed by FHA/VA are securitized. What is of interest here, however, is that these are subprime loans and by definition of greater risk. The willingness of the market to buy essentially a "package of problems" is indeed surprising, although as we will see later in this essay the market's willingness to buy these instruments was aided and abetted both by the credit rating industry as well as by various Government Sponsored Enterprises (GSE's) such as Fannie Mae and Freddie Mac.

[3] Mortgages held in MBS pools typically have maturities of either 15 years or 30 years. With prepayments occurring on those mortgages, the average life of an MBS can be closer to 8-14 years. Nevertheless, these are still considered longer-term investments.

ABCP is the money market version of a mortgage backed (or asset-backed) security. In an MBS, the owners of the pool of mortgages have agreed to buy into the pool and to wait for their money to be returned (with interest) as the mortgages in the pool pay off. You can always sell your MBS to someone else, but if you hold onto it you know that you must hold it until the very last mortgage has paid off to wring the last drop of your expected money (and interest) out of the MBS.

A piece of ABCP works slightly differently. The pool of mortgages that have been created is financed not by the combined sale of the pool to various owners, but through an issuance of short-term commercial paper. For the mortgage pool to stay afloat, new commercial paper must be regularly issued to pay off the previous buyers of the commercial paper. If at any point the market decides it does not want to buy a future issuance of the commercial paper that supports the pool, the last group of investors to have bought the commercial paper is left holding the bag. That last group must now wait until the mortgages (or in some cases MBS's) are either sold or pay out their underlying proceeds.

Refinancings of the commercial paper underlying certain mortgage pools began to fail in August of 2007. The triggering event was the invocation of an often-forgotten feature of ABCP, the "extendibility option."[4] ABCP that has an extendibility option gives the issuer the right to extend the day they have to pay back the CP holders. This feature, which can be found on occasion in traditional commercial paper, was widely viewed as a positive for everyone involved – it prevented CP issuers from getting squeezed by temporary liquidity problems on the specific day they had to pay off, giving them flexibility to raise the money. It was considered such a benefit, then, that buyers of CP would often forego the standard underwriting insurance that used to be a popular (and demanded) feature of all commercial paper.

Unfortunately what was so widely viewed as flexibility suddenly became viewed as a problem. CP issuers virtually never invoked their extendibility option in the past, so when certain issuers of ABCP in August 2007 invoked their extendibility right, markets panicked over the thought that the associated ABCP would not be paid off at all. Exacerbating that panic was the fact that the extendible ABCP was not insured against default, ironically because the extendibility option had come to be viewed in the markets as an offsetting protection feature that removed the need for insurance. A cascade of ABCP failures seeped through the market, both destroying the ABCP market (or at least the extendible ABCP market) and further drying up the market for mortgages or mortgage backed securities. Fearing the backlog of MBS's that might be dumped on the first person to step forward with an offer to buy (from all the ABCP pools looking to liquidate) no one wanted to buy MBS's at virtually any price.

[4] Not all ABCP has an extendibility option, but in the summer of 2007 more than half of all ABCP in existence did.

**The Lit Match: Interest Rates Go Up and So Do Defaults**

Analysts now widely agree that the US housing market was in a speculative bubble, and that that bubble burst some time around the end of 2006 or early 2007. Analysts also widely agree that the US real estate bubble buildup and eventual burst extended to other real estate markets around the world, in varying degrees.

The push towards subprime lending could not have accommodated the real estate bubble without an accompanying favorable interest rate environment. To help stave off the 2001-2002 recession resulting from collapse of the late 1990’s dot-com bubble, the US Federal Reserve dropped rates sharply. From a high of 6.5% in the third quarter of 2003, the Fed dropped rates to 1% by July 2003, and kept overnight rates below 3% until May 2005. US Treasury 10 year note yields, a major pricing benchmark for fixed rate loans, reached a peak of nearly 7% in early 2000, fell in sympathy with the Fed’s easing (and with the economy’s slowdown) to a low of nearly 3% by June 2003.

Analysts widely believe (and indeed, so do many at the Fed itself), that the strength and length of the Fed’s easing cycle was probably a bit more aggressive than needed to pull the economy out of the mild recession following the dot-com burst – post-9/11 sentiments may have played a role in the aggressive easing as well.

Once the Fed made the decision to end its easing, the decision to raise rates was implemented aggressively. Starting with the first uptick from the 1% Fed Funds rate in July 2004, the Fed pushed its overnight borrowing rate to 5.25% by July 2006 in a series of 17 rate hike moves. Other rates tied to the mortgage markets moved higher as well.

Without a doubt the Fed’s interest rate hike brought new home buying to a standstill and likely popped the housing price bubble. Unlike with previous interest rate tightenings, however, this housing slowdown had more ominous features, thanks to the new prominence of subprime loans. Many subprime borrowers had been brought into the home-owning marketplace through the use of floating or adjustable rate mortgage (ARM) products, which are most often tied to short-term interest rates. With barely manageable debt-to-income levels to begin with, sharp increases in debt financing costs brought on by the sharp and quick rise in short term rates pushed many new subprime homeowners over the brink. Loan delinquencies pushed higher, followed by loan defaults and eventually property foreclosures.

The delinquency rate on subprime adjustable rate loans rose quickly and sharply following the interest rate hikes. While normally in the 5% to 6% range in good economic times, the percentage of subprime ARM loans in 90-day delinquency (or worse) rose to 16% by October 2007, reaching a high of 25% in 2008. In 2008 nearly 11% of all homeowners have outstanding mortgages in excess of their current home values, giving a tremendous incentive to walk away and default. And of course the glut of homes put on the market by default and foreclosure simply exacerbates the housing price decline, fueling more defaults and foreclosures.

The rise in mortgage default rates stemming from the Fed's interest rate hikes was initially concentrated in the subprime adjustable rate mortgage category. At least at first, default rates for prime loans (both fixed and floating) did not move higher. Even the default rates for fixed rate subprime mortgages did not move substantially higher. But markets are risk averse, and the markets for MBS's (and for whole mortgages themselves) suddenly dried up. Buyers for MBS of all flavors[5] could not be found.

## Spreading the Pain: From Wall Street to Main Street and Back Again

Once the housing bubble burst and default rates on subprime mortgages began to rise, everyone connected to subprime mortgages began to suffer. Lenders suffered directly, as new loan origination slowed to a crawl and any subprime mortgages remaining on their balance sheets lost value, precipitating runs on those institutions. Organizations that had guaranteed the various mortgage pools, or that owned riskier pieces of the mortgage pools, began to fail. Money market funds exposed to ABCP as well as to the organizations that were failing suddenly became doubtful over whether they could return client monies in full. Let's review a few case studies of the transmission of the original problems of subprime mortgage defaults into organizations across the spectrum:

### *The First to Fail: Countrywide Financial*

Countrywide Financial was a major loan originator with a concentration in subprime lending, located in Calabasas, California. A major part of their business model was to repackage conforming loans to the government and non-conforming loans to the secondary market. As the market for mortgages and MBS collapsed in August 2007, Countrywide found itself unable to sell any of its non-conforming loans in the secondary market. Countrywide's business model depended on making new loans rather than on managing existing loans, especially existing loans that were facing a rising tide of delinquencies and defaults. A series of downgrades followed for Countrywide, making it more expensive for Countrywide to raise capital, and Wall Street analysts began issuing "sell" recommendations on the company's stock.

[5] When MBS's are created, the underlying mortgages are typically very homogeneous to each other. Thus there are different MBS's for fixed rate prime, floating rate prime, fixed rate subprime and floating rate subprime. Despite the fact that default rates were only rising sharply for floating rate subprime, however, all MBS experienced sharp price declines and vanishing liquidity in their respective markets by mid-2007.

Rumors of a portending bankruptcy filing plagued the company for months, and its stock price fell repeatedly. News stories of impending investigations of their business practices finally forced the company to sell itself to Bank of America in January 2008.

The loss of the company that had originated 1 out of every 6 mortgage loans in the United States rattled the mortgage markets even further, and also exacerbated the downward pressure on the values of other financial services providers.

***The Seizure of Freddie and Fannie***

To understand the role that Freddie and Fannie played in the current crisis, it is important to understand how each operates. Both are private companies but are considered to be "government-sponsored enterprises (GSE's)" albeit they were never officially "government guaranteed" enterprises – at least not until September 2008.

The best way to understand the two companies is to consider their balance sheets and income statements. To raise money for its operations the GSE's, like any other private corporation, issue stock (both common and preferred) as well as bonds that are direct obligations of the GSE's. With this raised capital (and ongoing profits), the GSE's go into the secondary markets and buy "conforming" mortgages[6]. Like a bank, these GSE's can hold these mortgages as assets on their balance sheets. Alternatively they can package these loans into MBS's and sell them to the marketplace. What is special about a GSE MBS is that they are guaranteed by the GSE in exchange for an ongoing fee paid out of the MBS pool. Once the GSE bundles mortgages into an MBS they can hold the MBS on their balance sheet or sell it, just as they can with a single mortgage.

The income statement for a GSE is fairly simple. In the expense column (aside from administrative expenses and payroll costs) is the cost of paying interest on all the direct debt issued by the GSE (commonly known as "agency" debt). In the revenue column is a mix of revenue streams, including the direct interest payments received on mortgages (or MBS's) held in their portfolio plus all the insurance premiums received for insuring all the MBS's that they have ever issued.[7] So the GSE's profit by the interest rate spread of their interest-earning asset portfolio over their interest-paying liabilities plus revenues earned from insuring MBS's they have issued and sold in the marketplace.

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[6] The definition of a conforming mortgage changes over time but is essentially a mortgage for less than a stipulated dollar amount, currently $729,750.

[7] And the GSE's have issued a sizable amount of MBS's. It is estimated that the two GSE's own or guarantee nearly half of the US's $12 trillion mortgage market.

So what happened to bring Freddie and Fannie low? In large part the sub-prime mortgage market meltdown and its attendant delinquencies. Freddie and Fannie have not only insured large numbers of subprime mortgage backed securities, they also directly own in their portfolio a sizable swath of subprime mortgages. And since these GSE's operate on leverage ratios in excess, at some points, of 70 to 1, concerns grew in the marketplace over whether both companies would see the value of their asset portfolios drop below the value of their liabilities.

On September 7, 2008, the director of the FHFA, the regulator of Freddie and Fannie, took control of the two GSE's under a conservatorship structure.[8] Under the conservatorship the Federal government effectively receives control of 80% of the two GSE's, diluting the existing common and preferred stock down to almost nothing. The Federal government has committed to inject up to $100 billion per each GSE and has replaced the boards of both firms. The government will, in effect, run the companies and pay the bills for the foreseeable future.

The market impact of the seizure of Freddie and Fannie was threefold: first, the value of the stock in both companies plummeted, which had a deleterious effect in numerous institutional portfolios (particularly bank portfolios) across the country. On the positive side, however, the direct debt of both companies rose, in the expectation that the government would live up to its long-implied promise of covering agency debt. In the market that insures agency debt, however (known as the Credit Default Swap, or CDS market), the takeover of Freddie and Fannie was determined to have been a "credit event" and, despite the fact that the bonds will likely continue to pay off, they have been declared in default for purposes of the CDS market.[9] This debate is scheduled to be resolved during October and is still pending.

***Apparently Not Too Big to Fail: The Fall of the House of Lehman***

In order to understand the tie-in of the subprime lending crisis to the fall of Lehman Brothers, we have to expand upon some of the points made in the section entitled "Securitization" above.

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[8] The FHFA was a newly formed regulatory authority over the two GSE's, having only been established in a previous bailout attempt only a few months earlier. The prior regulator was the Department of Housing and Urban Development (HUD), which had been one of the primary government agencies pushing the GSE's hard to provide liquidity in the subprime market.

[9] The market for credit default swaps (CDS's) is believed to be huge – one estimate has it in excess of $62 trillion, although more reasonable estimates place the size around $16 trillion – still, that's larger than the annual GDP of the United States. In a CDS, one counterparty insures another counterparty against a default of a specific bond in exchange for ongoing and sometimes an upfront payment. The CDS market may also have played an extensive role in exacerbating the credit crisis, in large part because these commitments are kept "off balance sheet" and typically uncollateralized, and it is difficult for investors to know the extent of the commitments a company may have to payoff in the event of bond defaults, or the risk it may have that its counterparty cannot pay off in the event of a default.

While the primary securitization facilities for conforming mortgages were the GSE's (Fannie and Freddie), the private sector was also capable of securitizing mortgages. Indeed, non-conventional (so-called "jumbo") mortgage loans could only be securitized by the private sector. Large investment banks such as Lehman Brothers generally served as the private sector equivalent for Fannie and Freddie in the so-called "non-agency" side of the securitization market. Companies such as Lehman also served to issue mortgage-backed securities in "risk slices", creating securities known as Collateralized Mortgage Obligations (CMO's). In essence a CMO is an MBS is which the first arriving monies from the mortgage pool are paid out to the highest level of investor in the CMO, the next monies to the next most secured investor and so on down to what is commonly referred to as the "Z Tranche" of a CMO – basically, whatever monies come in last. Investors in the Z tranche of a CMO absorb most of the losses from mortgages that default, and hence the Z tranches are the highest risk (and highest return) tranches of CMO's.

Lehman ran into difficulty when, while securitizing numerous subprime mortgages into CMO's, they chose to hold onto the weakest tranches of billions in those CMO's.[10] With the steady increase of defaults on subprime loans, Lehman's holdings of the loss-absorbing tranches substantially weakened the company. Numerous efforts were made to sell Lehman to outside investors, but Lehman executives would not sell if it meant ceding managerial control. As news of Lehman's weakness spread and its stock price fell, more Lehman counterparties asked to be let out of their deals (typically requiring the return of lent securities or other collateral). On Monday September 15, 2008, after a weekend of government brokered meetings to sell Lehman, the company was forced to file for Chapter 11 bankruptcy. The Dow fell 500 points out of fear that the fall of Lehman would presage a flood of similar problems for other financial services companies in similar straits. Lehman has methodically sold off various portions of its business since.

***Spurring the Feds to Act: Money Funds "Break the Buck"***

Money Market Mutual Funds (MMMF's) differ from other mutual funds insofar as they must commit to letting shareholders in and out of the MMMF at a fixed NAV of $1.00, known as "the buck." MMMF portfolios may not be worth exactly $1.00 per share, but so long as the true value of the portfolio stays in a very tight range around the buck, the MMMF is allowed to let investors in and out of the MMMF at $1.00 per share.

The SEC's tolerance for MMMF deviation away from $1.00 is very limited. If a MMMF's fair market value of its holdings falls below $0.9950 per share, the MMMF is deemed to have "broken the buck." Once a MMMF has experienced a "break the buck," it no longer qualifies to hold itself out as a MMMF

[10] Lehman officials have not made it clear if they made an intentional decision to hold onto those tranches or simply held them because as the market weakened they were unable to sell them.

– it is now just a plain mutual fund with a variable NAV per share. As a practical matter the fund can no longer redeem its shares at $1.00, and must redeem at the true NAV, whatever that turns out to be.[11] A MMMF would quickly lose all credibility with its investors if it broke the buck, and rapid outflows from the MMMF would be expected.

Only one MMMF is known to ever have broken the buck, although several are believed to have gotten close and been rescued by a capital injection from their sponsoring firm. On Tuesday, September 16, 2008, the Reserve Primary Fund announced that it had "broken the buck." The significance of this event cannot be overstated. The Reserve Primary fund is a relatively large MMMF, with more than $60 billion in assets. The Reserve Primary Fund was the nation's first MMMF, launched in 1971. Finally, the Reserve Primary Fund was not affiliated with a highly capitalized sponsoring organization, and as such did not have a sponsor with the type of "deep pockets" that might have been able to quietly inject capital to bring the fund back above "the buck."

So why did the Reserve Primary Fund break the buck? The answer is relatively straightforward – the fund held roughly $785 million (about 1.3% of its assets) in short-term direct obligations of Lehman Brothers. The bankruptcy of Lehman left the value of those notes questionable (possibly worthless), and the fund's value was brought below the $0.9950 trigger level.[12]

But the greatest impact of the difficulties announced by the Reserve Fund was the impact on government policy. In a recent interview on *60 Minutes*, Treasury Secretary Paulson admitted that it was the break-the-buck at the Reserve Primary Fund that caused him to advise the President that something other than the piecemeal bailouts done to date of Freddie, Fannie and AIG had to be done. Paulson expressed fear that a "run" on the nation's MMMF's, aside from the confidence-shattering symbolism of such an event, could lead to a wholesale liquidation of commercial paper which could, in turn, bring the entire economy to a grinding halt. The massive bailout package proposed by the Bush administration was the result.

**The Vultures Circle: Short-Sellers and Hedge Funds Target Vulnerable Institutions**

In the wake of the Fed's bailout of AIG with a two-year, $85 billion loan to forestall a potential bankruptcy filing on Tuesday September 16, 2008, share prices of numerous financial services companies began to fall over the subsequent two trading days. Market perception was strong that in addition to general selling of these companies' shares, short-sellers were piling on. Concerns were

[11] The "true" NAV per share for a variable NAV fund is simply the current market value of all of its holdings, adjusted for expenses, receivables, accruals and such, divided by the outstanding number of shares of the fund.
[12] Press reports at the time indicated the Reserve Primary Fund had a true value of $0.97 per share, but the actual value will be determined in time as the Reserve Primary Fund liquidates its holdings.

also expressed that "naked" short selling was occurring.[13] On Friday, September 19, 2008, the US SEC issued an order to temporarily prohibit short-selling in the shares of 799 financial services companies until October 2, 2008. The list was later amended to include additional companies. The order also required more public disclosure of short positions by institutional investors.

What is short-selling, who engages in it and how was it working to drag down the financial services sector? Any investor with a margin account at a broker, from the smallest individual investor to the largest hedge fund, can engage in short-selling. When you sell a stock short you ask your broker to borrow the target security from another client's account (who has of course given his/her permission for this), the broker lends the security to you, and then the broker sells it in the market for you. Eventually you must buy the security back and have the broker return the security to the account of the client from whom it was borrowed. If in the intervening time you can buy it back for a lower price than you originally sold it for, you will make money. If the stock has risen in price, you will lose money. Hence short-selling is a bet that the price of a stock will go down, and you lose that bet if the price of the stock goes up.

From a macro-economic point of view, short-selling adds selling pressure in a market above and beyond that which would be there solely from individuals who are directly selling their own shares of the stock. Short-selling allegedly played a role in the market turbulence that followed the collapse of Lehman and the bailout of AIG. It was widely believed that hedge funds were shorting key financial stocks in the expectation that those firms might collapse. The SEC stepped in to temporarily prohibit such short-selling, out of a concern that the downward pressure on the stock prices of major financial services companies could lead to a self-fulfilling implosion of those companies.[14]

**Government Intervention – A Work in Progress**

Markets soared on Thursday September 18 when it appeared that the government was planning to abandon its piecemeal approach to the credit crisis and take a more broad-based approach that has come to be known simply as "the bailout." Treasury Secretary Paulson confirmed the plan was in the works on Friday September 19, and by the weekend Treasury had issued a fact sheet containing their proposal and had submitted a plan to Congress for their consideration.

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[13] "Naked" short-selling is the short-selling of a stock before it has been borrowed.
[14] The reasoning behind this can be a bit complex. Much more so than non-financial companies, financial companies often have relatively highly leveraged balance sheets, and are heavily dependent on the capital markets for ongoing support of their asset base. Sharp declines in the market valuations of those companies can lead to a crisis of confidence (particularly if the credit rating agencies use the stock price decline as a reason to downgrade the company). A financial company can thus find itself quickly insolvent as a result, which the SEC sought to avoid by removing the downward selling pressure on these companies that was coming from short-sellers.

The Treasury plan was to issue up to $700 billion in US Treasury securities to purchase “troubled assets” from financial institutions.  These troubled assets would primarily be residential and commercial mortgages and mortgage-backed securities, although other security types might be considered.  The US Treasury would have discretion as to which firms they would buy the assets from, and in what manner.  Treasury would hire private asset management firms to manage the securities until such time as they matured or could be sold back to the market.  After an initial rejection by the House of Representatives, a somewhat revised plan was passed on October 3 and signed by the President.

The purpose of the bailout plan is to strengthen the balance sheets of leveraged financial service providers, to restore the confidence of lenders to those institutions, and thus to encourage the return of a free flow of capital in the marketplace. Whether, and to what extent it will succeed in those goals, of course, remains to be seen.

## CREDIT CRISIS GLOSSARY

Agency Debt – Debt issuance from US government agencies and government-sponsored entities. There are more than a dozen agencies and GSE's that issue debt, although the top four (FNMA, FHLMC, FHLB and REFCORP) make up more than 90% of the market. Some agency debt is tax exempt at the state level, while GSE agency debt typically is not.

Alternative Loans – Loans made pursuant to non-traditional forms of documentation, including so-called "stated-income" loans.

Asset-Backed Security (ABS) – A pool of loans that has been repackaged into a single security for re-sale to investors. The loans can be auto loans, mortgages, credit card receivables and equipment leases. Technically the ABS market includes mortgage-backed securities, but it has become industry practice to use the term "ABS" to refer to all ABS except MBS.

Asset-Backed Commercial Paper (ABCP) – A pool of loans that is financed by the regular and sequential issuance of commercial paper. The loans in the pool typically have longer maturities than that of the commercial paper used to finance them, since commercial paper can be issued in maturities not to exceed 270 days by federal regulation. Hence unlike MBS and ABS, ABCP has an inherent asset/liability maturity mismatch.

Break-the-Buck – A money market mutual fund is said to "break-the-buck" when the value of the securities in which the fund has invested falls below $0.9950 per share. Once this occurs the money market mutual fund no longer qualifies for the right to transact shares at a fixed $1.00 per share, and must redeem shareholders at the true NAV.

Bubble – Markets are said to be in a bubble when prices for the underlying goods or services far exceed any rational estimate of the asset's true worth. The determination of whether a market is experiencing a "bubble" is subjective and should not be determined solely by rapid price movement. For example, rapid price hikes during times of economic catastrophe (floods, fires, earthquakes) are not considered to be indicative of a market bubble, since the restricted supply of the good is considered a rational explanation for its higher price.

Collateralized Mortgage Obligation (CMO) – A form of Mortgage-Backed Security in which the right to receive the income streams from the underlying pool of mortgages has been carved into separate "tranches" and sold to separate investors. Typically these tranches differ as to the timing or reliability of the arriving income stream, so that lower tranches are riskier investments than higher tranches.

Credit Default Swap (CDS) – A CDS is an over-the-counter transaction between two counterparties in which one counterparty agrees to pay the other an insurance premium in exchange for a promise to receive the par value of a specific bond in the event that that bond experiences a "credit event" (i.e., it defaults). A CDS is typically an agreement by the payor to make periodic insurance payments, although in the case of certain high-risk bonds the counterparty providing the insurance may also ask for a significant upfront payment.

Government-Sponsored Enterprise (GSE) – A private sector company that has been chartered by the Federal government to provide a particular service the government considers a social good. Typical GSE's include Fannie Mae and Freddie Mac, but the US Postal Service and the Tennessee Valley Authority are also GSE's.

Money Market Mutual Fund (MMMF) – A class of mutual funds which is permitted by the SEC to (a) hold itself out with the designation "money market mutual fund" and (b) to issue and redeem shares at a fixed price (usually $1.00 per share) in exchange for the fund's adherence to a series of restrictions outlined in Rule 2a-7 of the Investment Company Act of 1940.

Mortgage-Backed Security (MBS) – A security which grants its owner the right to receive a pro rata share of the income and principal distributed by a defined pool of relatively homogeneous mortgages pulled together for the express purpose of creating and issuing the MBS.

Mortgage Pool – A group of mortgages similar in type, rate, maturity and other defining characteristics that has been pulled together to serve as the asset vehicle in a mortgage-backed security or a collateralized mortgage obligation.

Origination – The act of making an initial loan.

Prime Loan – A loan made to the highest quality of borrower with strong documentation as to the quality of the asset being financed and the borrower's ability to repay the loan.

Securitization – The act of bringing together loans of a similar type for the purpose of packaging those loans together into a pool and selling shares of the income received from that pool to investors.

Subprime Loan – A loan made to a borrower known to have credit deficiencies and/or low levels of income relative to the anticipated debt payments needed to paydown the loan.