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## **THE 3% SOLUTION: FINANCIAL MARKETS AND THE FEDERAL BAILOUT**

The federal government is seeking to give itself considerable new authority in its effort to unfreeze U.S. credit markets and rescue the firms that participate in them. As has been widely reported, the U.S. Treasury may purchase up to \$700 billion in distressed mortgage-backed securities, take equity positions in distressed firms, and modify existing terms in underlying mortgages. The hope is that the Treasury will be able to use these proposed new powers to prevent further deterioration of the nation's economy and financial systems that have been hit with closed credit markets, bankruptcies and buyouts of major financial institutions, the end of independent investment banking, declining economic growth, and rising unemployment.

- What is the nature of the crisis this bailout is meant to alleviate?
- How is the bailout supposed to work?
- What is the outlook for the credit and equity markets?



It is common knowledge that a contagion in the home mortgage market lies at the center of the financial crisis. For many investors, it may come as a surprise that only a tiny minority of all home mortgages—about 3%—are currently in default (the total number may rise as high as 5%). If about 97% of mortgages are performing well, how is it possible that the other 3% have affected financial markets so deeply?

### LEADING CAUSES OF THE CURRENT CRISIS

The answer is leverage, with assistance from innovative securities, incomplete risk management practices, and imperfect regulatory oversight. Leverage (that is, borrowing in order to increase funds available for investments) in the modern mortgage market has had profoundly positive as well as negative effects.

**Individual homeowners** can take advantage of leverage—mortgages—to purchase homes that would otherwise be out of reach for them.

#### Commercial banks and other mortgage lenders

traditionally use leverage—lending out more than they have on deposit—to expand their ability to fund mortgages and other loans. They can then sell mortgages to mortgage guarantors and investment banks in order to free-up funds to issue more mortgages.

Investment banks (e.g., Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Bros.) and mortgage guarantors, such as Fannie Mae and Freddie Mac, also use leverage, issuing bonds or other types of borrowing, to increase the number of mortgages they can purchase from mortgage lenders. They can then package thousands of mortgages into structured securities (mortgage-backed securities, or MBS, and collateralized debt obligations, or CDOs), which can be held or sold to make room for more mortgage purchases.

Until the 1990s, leverage in the home mortgage market was largely confined to individual homeowners, commercial banks, and the mortgage guarantors. Commercial banks commonly held on to the mortgages they issued for the life of the loan. Beginning about 15 years ago, the new MBS and CDOs were increasingly used to expand the mortgage-issuing capacity of commercial banks and other mortgage

lenders. Today, outstanding mortgages total in the trillions of dollars, and investment banks have come to play a major role in the largely unregulated structured securities markets. As an add-on, the market ballooned for credit default swaps (CDS) on MBS and CDOs—a type of insurance that will pay off in case an MBS or CDO fails to perform due to defaults among the underlying mortgages. (AIG, the insurance firm, was heavily involved in the CDS market).

Leverage and credit insurance facilitated a major expansion of the home mortgage market, which, in this decade, was also fueled by the Federal Reserve's low, short-term interest rate policy that allowed investment banks to borrow at short-term rates and invest in structured securities paying higher long-term rates. The expansion of home mortgage credit also fueled a massive rise in home prices and home construction, and it stimulated home purchases by borrowers with less-than-solid credit as lenders with available funds looked for new opportunities, i.e., the subprime and "Alt A" markets. These included short-term "teaser" mortgage interest rates that automatically ratcheted up after two to three years.

It is now common knowledge that the overheated housing market came to an end when the Fed raised short-term interest rates, the first wave of subprime teaser rates ended, and housing prices stopped rising. Mortgage defaults, which had been well under 1% of the home mortgage market, began rising and were especially concentrated in the subprime arena. For the second quarter of 2008, the foreclosure rate for "prime mortgages" was 0.34% while "subprime ARM" foreclosure rates climbed to 6.62%. These figures are record highs, according to the Mortgage Bankers Association, a national group that represents the real estate finance industry.

### EFFECTS OF MORTGAGE DEFAULTS COULD NOT BE PREDICTED

Defaults can be devastating to homeowners, but, even at fairly low rates, they can be and have been devastating to the massive mortgage finance industry, because of leverage and investor perceptions. The practice of packaging together subprime as well as prime mortgages into individual MBS enabled investment banks to dilute the extra subprime default risk with less risky prime mortgages and to obtain

strong credit ratings. However, investors, and the banks themselves, found it difficult to know with certainty what the effect of a relatively small, but growing number of mortgage defaults would have on any individual MBS or CDO. So the news of defaults caused many investors to wonder just how risky even highly-rated MBS or CDOs really were, thus making them less enthusiastic or even uninterested in purchasing these securities.

With a change in perception, leverage, which had helped investment banks and mortgage guarantors generate additional returns when times were good, bit portfolios hard as structured security prices dropped and transactions slowed down. For example, it was not uncommon for an investment bank to borrow more than 30 times the actual capital it had on hand in order to invest in MBS or CDOs. Hypothetically, an investment bank might have \$10 billion in capital and then borrow \$300 billion to invest in structured securities. In good times, investment returns are magnified by that leverage. But if the structured securities market turns down, then losses are also magnified. If the price of MBS held by the bank drops by even 5%, or if only 5% of the MBS securities go into default, the bank has more than lost its entire underlying capital base (5% default = \$15 billion).

In a nutshell, this is what happened to the investment banks. Highly levered, they couldn't sustain themselves when investors grew skittish about structured securities. As investors repriced the risk of structured securities, i.e., demanded lower prices, the banks could not or would not sell in order to raise funds. One major reason for their refusal to sell was that, once a sale was enacted at a much lower price than those that had prevailed in the past, the bank would be required to use that sale price to mark similar securities to market. So by selling even one such security, the bank may have had to reprice the entire portfolio, which might then threaten its capital base.

Inevitably, then, a small change of less than 3 percentage points in the default rate on mortgages translated, through leverage and investor perceptions, into an enormous repricing of risk, a credit market deep freeze, and the demise of the big investment banks.

## **FED'S BAILOUT SOLUTION AND ITS POTENTIAL RAMIFICATIONS**

So what is the 3% solution? The federal government recognized that the mortgage market infection, while still relatively small, affected millions of homeowners, fixed-income investors, and major institutions. It also spread to other credit markets, such as credit cards, auto loans, and even commercial real estate. In addition, a specific threat to investment banks could cascade into other areas. Investment banks perform many other useful services, such as underwriting corporate bonds and stocks, advising mergers and acquisitions, and investing in other assets, so the demise of investment banking could hamstring other parts of the financial system. On this basis, the government was willing to step in to unfreeze the credit markets and protect against spreading institutional chaos.

With the new legislation, the U.S. Treasury, in partnership with the Fed, will be empowered to buy distressed structured securities and hire investment managers to manage and dispose of them. This would serve to establish prices for these assets and to get them off the books of investment and commercial banks. The hope is that trust and confidence would be restored to financial institutions and that the market for these securities would "reliquify." There is also a possibility that the federal government could, in the end, make money for taxpayers by buying low and selling higher. In any case, the federal government and taxpayers would take on the risks of any structured securities in exchange for the prospect of increasing the stability and liquidity of the financial system.

In addition, the Treasury can also modify individual mortgages contained in the securities it purchases. This raises the possibility that the Treasury could act to reduce the mortgage default rate and provide relief to some homeowners.

At the institutional level, along with purchasing structured securities, the federal government (the Fed) will take on greater oversight of the investment banks, which are either being acquired by commercial banks or transforming themselves into commercial banks.

Will all this actually work? The bailout program is sketched in broad outline, but the details won't be known for some time. One critical issue is the federal government's ability to know where all of the shaky mortgages have gone. If it can identify which structured securities are most impaired and which are less so, it might be possible to restructure individual mortgages so that the securities containing them could be upgraded and investor confidence strengthened. But the time and expense that may be involved in tracking the relatively small proportion of shaky mortgages contained within trillions of dollars in MBS and CDOs is a major challenge. And, even if this analysis is possible, it is unlikely that the federal program will be able to complete it prior to purchasing the structured securities.

Another critical issue is what price to pay for impaired securities. If the Treasury pays low prices for these securities, it can maximize the chances that they would provide a positive return to taxpayers when the securities are later resold. If it pays higher prices, then it increases the chances that the banks and other distressed institutions will achieve solvency. So it remains to be seen how the Treasury will set prices for MBS and CDOs. In any event, security prices will be set by fiat and/or negotiation with the banks in cases where precise valuations of the instruments are impossible to ascertain

#### **HOW THE FED PROGRAM MAY AFFECT INVESTORS**

With uncertainty surrounding the entire distressed security issue, the federal program may need to undertake several experiments to determine which are the most efficient and effective approaches to take. In the interim, we can expect some ripple effects on the fixed income and the equity markets. Fixed income markets, many of which have been effectively shut down by nervous buyers and sellers as bid-ask spreads have widened out, could begin to unfreeze as the federal government takes on additional risk, but pumps additional liquidity into the most affected areas. The flight to short-term U.S. Treasuries could abate as investors become more willing to return to allocating assets to the riskier areas of the fixed income markets and less willing to accept a negative real rate of return on Treasuries. Some money market funds, which have been pressured by falling yields on short-term assets, might also benefit.

Corporate bond and high-yield bond spreads, which increased rapidly as the financial crisis emerged, could fall back once stability begins to return.

Longer term, there could be some effect on overall interest rates as investors demand higher yields due to a further expansion of U.S. debt needed to fund the bailout program and as the Fed begins to raise short-term rates again.

As the debt crisis began to affect the fixed income markets and investor perceptions, the equity markets trended down and have become highly volatile, with the greatest effects hitting financial services and consumer durables. Most recently, it seems as if the markets have reacted strongly to every twist and turn of the congressional debate over the bailout program. As time goes on, if the federal government-structured security program unfolds with positive effects, this could help bring some needed clarity to the financial services sector. Equity markets may respond positively to this good news.

However, broader macro concerns remain. The global and the U.S. economies continue to slow, and the corporate earnings picture is far from bright. Overall price/earnings ratios are elevated compared to their long-term trend and overly optimistic analyst earnings expectations could prove disappointing in the third and fourth quarters of 2008, thus raising P/E ratios even further. Despite some hope for a short-term stock rally, fundamental support for a sustained equity market takeoff appears to be missing, at least until there is a more realistic expectation of improving profits.

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