The Size, Scope, and Future of the Sub-Prime Crisis

"One trillion dollars."

Those were the words of Jim Grant, Editor of Grant's Interest Rate Observer, when asked on *60 Minutes* to estimate the size of the sub-prime market.

To put this in perspective, this is roughly the size of the U.S. defense budget.

On the same day, in *The New York Times* Ben Stein put the size of sub-prime losses at $100 billion. That's still pretty large, a bit smaller than the fiscal stimulus package just passed by Congress.

Both Grant and Stein are correct, and we explain why below. The sub-prime crisis is not well-understood, particularly with respect to the amount of money at stake. In this article, we will look at this issue, and the data used to quantify these estimates.

There are other questions surrounding the sub-prime crisis, such as the likely path it will follow and what might ease the credit crunch.

For our analysis, we turned to two experts on the mortgage markets: Dan Gertner, an analyst with Grant's Interest Rate Observer, and Michael Youngblood, PhD, Director of Fixed-Income Research at FBR Investment Management in Virginia.

The Size and Scope of the Problem

According to Federal Reserve data, the home mortgage market is approximately $11 trillion. Frederic Mishkin, a Fed Governor, put the sub-prime market at a little less than 10% of this total, or approximately $1.1 trillion. But sub-prime is not a perfect definition. It generally refers to loans made to borrowers with credit scores below 620 with a history of credit problems and without the documentation and income verification standards that are required by the Federal Housing Authority. Another 10% of the home mortgage market is in Alt-A loans, which are between the prime and sub-prime markets. These loans were made to borrowers with good – but not necessarily verifiable – income (for example, commissioned salespeople); they represent a lower credit risk than sub-prime.

Between 50% and 70% of sub-prime debt has been securitized.

Youngblood puts the size of the sub-prime sector a little higher, at 14.2% of the total mortgage market. In addition to relying on data from the Fed, he obtains data from Loan Performance, a specialized data provider.

Sub-prime issuance peaked in 2005 at $625 billion, when it was 20% of the mortgage market. In 2006, $600 billion of sub-prime loans were issued, representing 20.6% of the market.

The Mortgage Bankers Association currently estimates that 16.3% of sub-prime loans are delinquent, or about $180 billion. Approximately 6.9% ($76 billion) of sub-prime loans are in foreclosure.

That puts the total of non-paying sub-prime loans at $256 billion. Between $50 and $100 billion has been written off by banks, which is the data Ben Stein cited.

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The larger question concerns how much will eventually be written off. According to Gertner, this depends on how low housing prices will go. The S&P Case Shiller housing index shows housing prices are down 7.7% from November 2006 to November 2007. Gertner sees another 12% of price decline ahead, putting the total drop at 20%, but cautions that the total decline could be as large as 30%.

A 30% decline in housing prices would wipe out $300 billion of sub-prime debt.

Housing Oversupply
800k-1mm vacant houses
500k excess rental units
250k excess homebuilder units
1.5+mm total excess housing units

Many sub-prime loans were made with no equity and interest-only payments. A 30% price decline, without any equity, goes straight to the bottom line – wiping out 30% of the roughly $1 trillion in debt.

Supply and demand imbalances in the housing market are large enough to trigger a 30% decline in prices. On the supply side, the census bureau is reporting that home owner vacancy rates (i.e., houses sitting vacant) are at 2.8%. From 1956-2003, this number hovered between 1% and 2%. It broke out in 2003, and is now considerably higher than ever in the past.

An extra 1% of vacant houses represents between 800,000 and 1 million excess housing units. Rental vacancy rates are similarly up – about 1.6% above historical levels – representing another 500,000 units that need to be absorbed. Lastly, there are approximately 250,000 units of excess home builder inventories.

Adding this up, approximately 1.5 million housing units need to be absorbed into the market, over and above historical levels.

On the demand side, the Fed publishes a quarterly survey of senior loan officers. Data from Q4 of 2007 show that 72% of respondents are reporting a decline in demand for borrowing.

How Sub-Prime Debt Triggered the Credit Crunch

The sub-prime debt that may eventually be written off represents a small corner of the financial markets. Yet its impact has been devastating. The securitization business is at a standstill, commercial lending has slowed to a trickle, and all this is pushing the economy closer to a recession.

Youngblood calls this the "financial butterfly effect" – a small incident with disproportionate consequences.

According to Gertner, the markets collapsed because of a loss of trust. "One of the great innovations in structured finance was the reallocation of risk achieved by securitization," says Gertner, adding that "a consequence was that nobody knew where the risk was." The markets woke up to the fact that CDOs were a whole lot riskier than their AAA ratings indicated, and started to question the broader lending markets. "This was the reason LIBOR had blown out," says Gertner. "Banks were not willing to lend to one another, because they didn't know what each other was holding."

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Youngblood calls the situation as a panic, and in a panic the herd mentality prevails. "The rating

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agencies fueled the panic by coordinated and massive downgrades of non-agency securities," he said, adding that the panic was initially brought on by a "sharp and steady rise in default rates."

Only a "microscopic" part of the crisis was due to loan rate resets, according to Youngblood. "What we have seen are defaults and losses due to liberal underwriting and a weakening economy, not a failure of lenders to adjust mortgage resets downwards," says Youngblood. He noted that massive modifications are taking place to mitigate reset problems for consumers.

Value among the Ruins

Panic and distressed securities are two of the ingredients that value investors thrive upon. We asked both Gertner and Youngblood whether the current situation has created investment opportunities.

Investing in CDOs requires quantitative horsepower and skillful analysis. In addition to owning sub-prime loans, many CDOs owned other CDOs, dramatically increasing the complexity of analysis required. Gertner sees some activity in these markets, mostly among hedge funds, but at prices that are less than 20 cents on the dollar. "It's like a Russian doll," says Gertner. "You remove one layer only to find another, interconnected layer."

Gertner's firm is looking at two companies that may profit after the sub-prime crisis clears. Fidelity National Financial (FNF) is a title insurer with a depressed stock price, but with no credit exposure to the mortgage markets. They collect a fee for insuring titles, and are able to scale their workforce to lending activity. PHH Corporation (PHH) is in three businesses: the management of fleets of automobiles, mortgage production, and mortgage servicing. The first business was going to be sold to General Electric and the other two to Blackstone in an LBO transaction. Lack of credit nixed the deal, and the stock is now trading at the price GE was going to pay for the fleet business, valuing the mortgage businesses at nothing. PHH's book of mortgage business is not sub-prime, but they are penalized along with the other sub-prime lenders.

"A broad brush has tarred the market."
-- Youngblood

Youngblood agrees that significant investment opportunities were created. "A broad brush has tarred the market," he notes. Youngblood and his team model the complete mortgage securities market with tools that he believes only two or three other institutional managers possess. He noted that "opportunities abound from AAA to unrated classes of non-agency mortgage-backed securities; the secondary market has priced them to the worst possible outcome, but we are able to identify certain securities that should experience better outcomes."

An End in Sight?

"One of the least understood aspects of the sub-prime crisis is that it is a crisis of lending standards in general," says Gertner. "Sub-prime is the first domino to fall – these borrowers were the most exposed."

Gertner and Youngblood see more pain ahead in markets affected by imperfect lending practices and insufficient collateral. Henry Macklowe is being forced to cede control of properties he could not refinance to Deutsche Bank, evidence of trouble in the commercial lending markets. Leveraged loans – financing provided to already debt-ridden companies – now represent approximately $200 billion of capital on the balance sheets of investment

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banks, according to Gertner. With these bonds now trading in the high 80s and low 90s, Gertner sees a 10% write-off as likely.

The key determinant for recovery is in the housing market, which Gertner says will "take a number of years to recover, due to excess inventory and evolving lending practices." Excess inventory must be absorbed and lending practices stabilized for a recovery to take hold.

Gertner's data shows housing starts are at an annualized rate of 1 million. Over the last 25 years, population growth and shrinking households have absorbed approximately 1.3 million units, implying the housing industry is now creating 300,000 units less than the market demands. It will take five years for the 1.5 million units of excess inventory (noted above) to absorb the 300,000 units of underproduction.

Gertner expects to see a recovery in less than five years. "Housing starts will continue to decline and the inventory will shrink," he says, adding "the best news would be if builders stopped building houses."

Youngblood has a similar outlook, and expects the housing market to recover in the 2010 timeframe. His data shows the average peak-to-trough cycle in housing has been 4.5 years and, with the last peak in Q3 of 2007, the trough should be in early 2012. "But there is a one year standard deviation on these numbers and, since many markets peaked before Q3 of last year, we will see recovery well in advance of 2012," says Youngblood.

Youngblood predicts liquidity in the prime securitization mortgage market in mid-2008. "Leading lenders, such as Wells Fargo, Bank of America, Citicorp, J.P. Morgan, and WAMU will generate enough prime and near-prime loans that can't be held on their balance sheets, and they will force the reopening of the markets, but in lower volumes similar to what we saw in 2000 and 2001."

The Lasting Impact of the Sub-Prime Crisis

"Re-securitization [packaging securitized debt into other pieces of securitized debt] will go away and will have a hard time coming back," says Gertner. Both he and Youngblood agree conventional securitization will reemerge, and consumers will realize the benefits of lower interest rates achieved through debt repackaging. "But the rating agencies cannot assign risks to re-securitized debt, and that is where the trouble is occurring," notes Gertner.

Ratings agencies will see their business impaired. "AAA is the brand name of the agencies, just like Coke is a brand name" Gertner says, adding, "Rating agencies cannot sell their services if people don't believe in the AAA brand."

Gertner and Youngblood agree the ratings agencies had good information, but perhaps not as extensive or perfect as what is available to some of the bigger market participants. Their failure was in their models, which among other things did not foresee a decline in housing prices. Nor did the agencies forecast the degree to which borrowers would lie on loan applications when presented with the opportunity for easy money. Youngblood also faults the agencies for incorrectly modeling factors such as the correlation between different sectors in the economy and the housing market. "It is shameful," Youngblood says. "There is significant academic research and they had ample guidance on how to model these effects."

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The ratings agencies have limited their liability by claiming protection through free speech under the First Amendment. But Gertner asks "why are they in business if investors cannot rely on their data?" The ratings agencies' models are evolving on an almost daily basis, and Gertner is confident that "in two or three years it will not look as it has in the past."

"We will see a better framework that inspires investor confidence."
-- Youngblood

Youngblood does not anticipate structural changes in the ratings industry, but expects dramatic improvements, including stricter rating criteria for every form of consumer and mortgage security, and more extensive and accurate disclosure of risk factors. "We will see a better framework that inspires investor confidence," says Youngblood.

Credit cards, automobile loans, student loans, and other forms of consumer credit will be permanently changed. "Lenders will be less willing to extend credit and will charge more," says Youngblood. "They will be quick to curtail revolving lines of credit and to recover amounts in default," he added. So far, these effects have been cushioned by weakening in consumer confidence and spending.

Final Thoughts

Youngblood laments the effect the crisis has had on credit-worthy borrowers. FHLMC and FNMA rates (relative to 10-year Treasuries) are at their highest levels since 1983 and jumbo loan spreads have not been this high since 1986. "In just a few months we have rolled back the gains to homeowners of a generation of mortgage finance," notes Youngblood.

"It remains to be seen how fast confidence will be restored and the cost of credit reduced," says Youngblood.

"Delinquencies will go up; we are just starting to see the beginning," says Gertner. With the economy still growing, albeit at a slow .6% pace, and unemployment still low, Gertner remains optimistic, but cautions that the "bogeyman is a recession." "A lot has been tried to jumpstart the economy, but so far nothing has worked," adds Gertner.

Our belief is the credit markets will stabilize as the housing market reaches equilibrium and lenders regain the confidence to revive the securitization industry. Until the extent of the at-risk debt is identified, a timetable cannot be estimated. Specifically, the markets will need to quantify the amount of Alt-A, commercial, and leveraged loans, and other forms of consumer debt facing the combined problems of insufficient collateral and lax lending standards.

For advisors, we subscribe to the conventional wisdom that this crisis will be no worse than events of seemingly similar magnitude – e.g., the LTCM collapse of 1998. The markets have weathered these storms, rewarding investors with long term horizons who bought opportunistically when values were depressed and the markets in disarray.

The danger, as some economists suggest, is this time will be different. They point to failures such as the "lost decade" in Japan, where a collapse in the housing market led to a ten-year malaise in their markets. Similar events have happened in other developed economies, a topic we will examine in a future article.

In the short term, as Gertner says, "until the market understands risk, the markets will be frozen."

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