Economics & Strategy

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US Subprime—Has the Correction Gone Too Far?

by Benjamin Tal

It's far from over. The news from the US subprime space will get much worse in the coming year, with default rates surging to unprecedented levels. But what really counts for the market is how much of this bad news is already reflected in current prices. It turns out that not only did the barrage of negative headlines of recent months raise the level of market immunity to adverse subprime news, but in fact, even after its recent improvement, the mortgage-backed market is currently pricing in a darker picture than the one likely to emerge when the smoke clears.

Subprime Defaults—You Ain't Seen Nothing Yet

While the credit squeeze extended well beyond subprime, the reality is that, at its core, this is a subprime crisis. And the news coming from that space will continue to dominate markets.

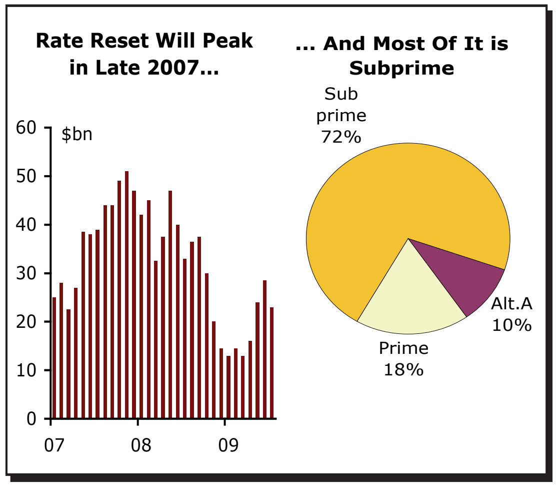
So let's see what's in the pipeline. The process of mortgage rate resets—the catalyst of the subprime meltdown—is far from over. Interest rates on roughly $700 billion worth of mortgages are due to be adjusted upward by the end of 2008. The number of reset mortgages will reach its peak late this year and will start easing slowly during the course of 2008. More than three-quarters of those mortgages are securitized, and more than 70% of them are subprime (Chart 1).

That picture is well understood. But what matters is not just the direction of the default rate, but its ultimate magnitude. There is enough information in the pipeline to allow us to form an educated guess regarding the likely trajectory of subprime defaults in the coming years.

Bad Loans Getting Worse

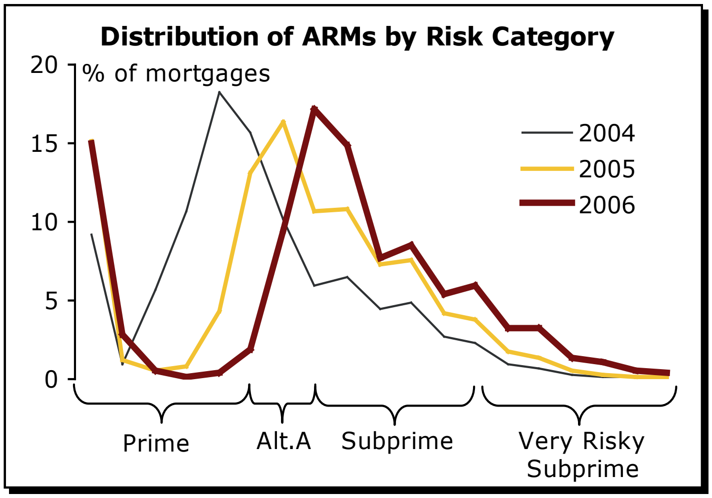
Since the vast majority of the subprime mortgages taken since 2004 were originated with a teaser rate that is fixed for two years, the mortgages now being reset and those that will be reset in 2008 are the ones that were originated in 2005 and 2006. And as illustrated in Chart 2, the quality of those mortgages has deteriorated with every passing vintage year. The risk distribution of adjustable rate mortgages taken in 2006 (to be reset in 2008) is much less favorable than the 2005 vintage which, in turn, is worse than the 2004 vintage.

Chart 1
Mortgage Outstanding To Be Reset



Source: Loan Performance, CIBCWM

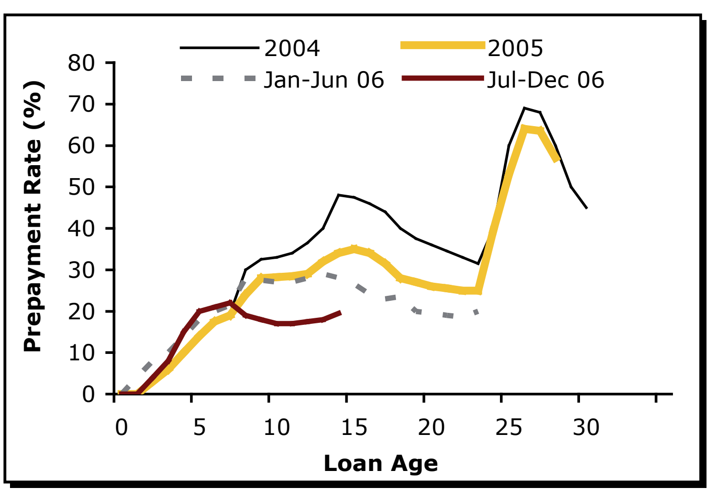
Chart 2
Risk Profile Rising with Vintage Year



Source: First American Corelogic, CIBCWM

Not only was the quality of the newest mortgages inferior, but refinancing them ahead of the reset deadline is becoming increasingly difficult. For the 2004 and 2005 vintages, no less than 60% of subprime borrowers were able to refinance out of the pool around the reset period (Chart 3). That's no longer the case. Subprime borrowers of the 2006 vintage increasingly find themselves locked out of refinancing, with mortgages issued in the first half of 2006 and now approaching 22-24 months not yet showing any notable pick-up in prepayment activity. And for every additional borrower staying in the pool and facing a huge rate jump, the probability of default rises.

Chart 3
Prepayments—Less of An Option for Most Recent Vintages

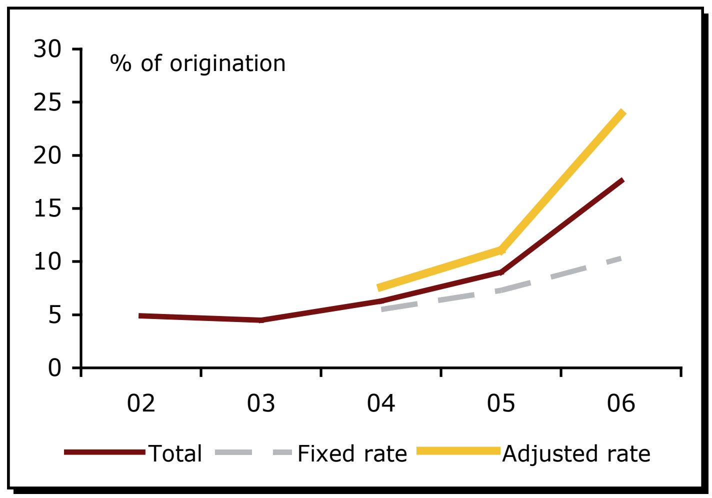


Source: Loan Performance, Intex, Barclays Capital, CIBCWM

Negative Equity

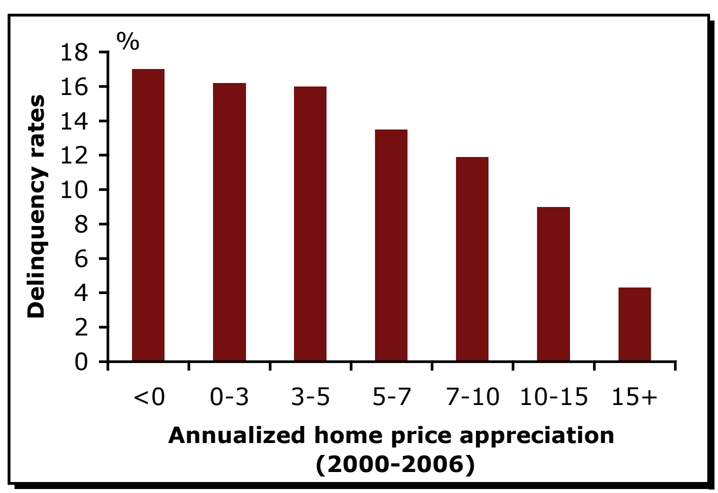
What's more, while previous vintages were able to enjoy some appreciation in home values, the 2006 vintage has experienced mostly flat to declining house prices. Given that most of those mortgages were taken with little to no money down, it is hardly a surprise that no less than one-quarter of adjustable rate mortgages originated in 2006 are now in a negative equity position (Chart 4). And that's with house prices falling by only 3% on a year-over-year basis. An additional 10% drop in prices will take the negative equity rate to a dazzling 40% of originations. Falling prices and rising negative equity positions is a sure recipe for increased defaults. Indeed, default rates are notably higher among properties that experienced falling prices or limited price appreciation (Chart 5).

Chart 4
Negative Equity—By Year of Origination



Source: First American Corelogic, Loan Performance, CIBCWM

Chart 5
Delinquencies Rise Where Home Values Don't



Source: Loan Performance, MBA

Having said that, movements in national house prices are of limited use when it comes to evaluating default in the subprime space, since the geographical distribution of subprime loans is hardly uniform. In fact, close to 40% of recent subprime exposure is concentrated across only six metropolitan areas, with Los Angeles ahead of the pack, followed by San Francisco, New York, Chicago, Washington and Miami. Accordingly, any house price projections regarding subprime defaults should account for this bias by applying appropriate weights based on subprime exposure by city/state.

Subprime Defaults on the 2006 Vintage Will Reach Record High

So the picture that emerges is that 2006 is, by far, the worst vintage due to poor underwriting, reduced prepayment activity and weaker home price appreciation. And as illustrated in Chart 6, this reality is already reflected in the trajectory of delinquency rates of that vintage compared to 2005. Note also that mortgages originated in the first six months of 2007 are now performing as badly as those that were originated in the second half of 2006, as mortgage providers were slow to react to the changing subprime environment. Look for the performance of mortgages issued in the second half of 2007 to improve dramatically.

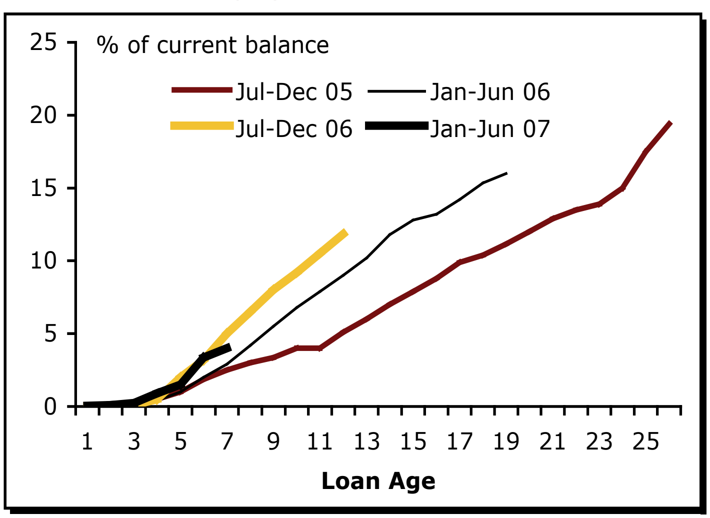
Many of the losses on the vintages covering the 18 months to June 2007 are front-loaded. Early payment default rates on these vintages have reached record-highs and are more than twice as high compared to the 2005 vintage. Important factors behind this trend are the surge in second lien mortgages, which usually experience high early payment default rates, and a significant jump in mortgage fraud. In fact, based on recent estimates[1], as much as 70% of early payment defaults may be linked to misrepresentation of the original loan application. This is a clear reflection of the deterioration in underwriting standards and passing on the risks seen in 2006 and early 2007.

Based on this information and our main case macro scenario[2], we predict that the cumulative default rate on subprime mortgages for the 2006 and early 2007 vintages will reach 25% with the loss rate averaging just over 12%. To put things in perspective, this outcome is 35% worse than the losses seen in the 2000 vintage loans from Michigan, Indiana and Ohio—the worst performing vintage and geographic locations to date, and roughly in line with the performance of the 99th percentile of regional default rates in the recessionary vintage of 2000-2001.

What's Priced In?

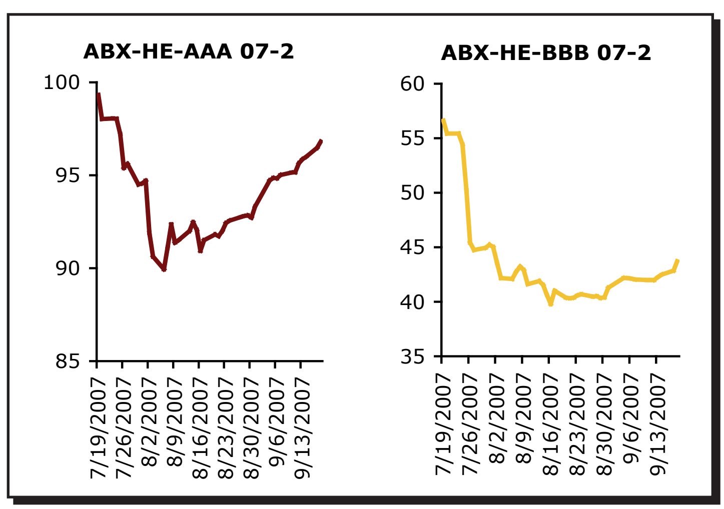
That's what we believe to be the most likely scenario. But what does the market think? The closely watched ABX subprime-linked default swap indices can be used to derive the implied probability of default on the underlying pool of debt in the MBS market. The indices are constructed as equally weighted baskets of credit default swaps for tranches with different credit ratings of 20 underlining subprime MBS. Indices linked to "on-the-run" AAA and AA rated subprime tranches are down by 4.2% and 11.5% respectively since mid-July, while

Chart 6
Subprime Mortgage in Severe Delinquencies



Source: Loan Performance, Intex, CIBCWM

Chart 7
Subprime Credit Default Swap— Enough of a Correction?



Source: Markit

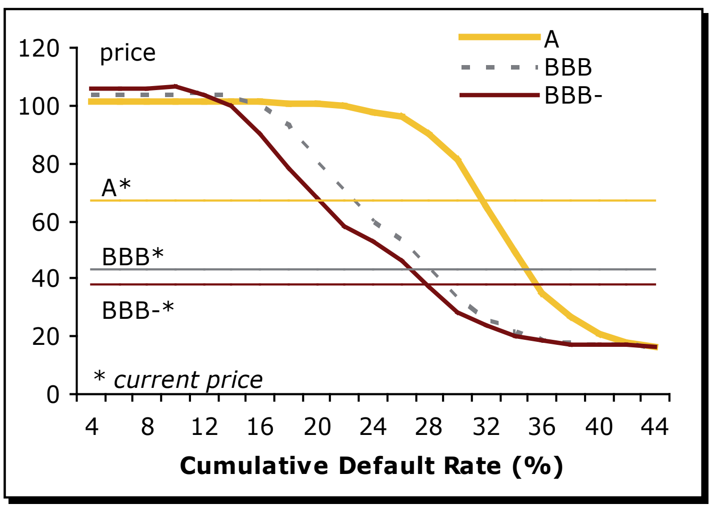
the BBB and BBB- indices now pay less than 45 cents to the dollar (Chart 7).

But those prices also tell us something about the implied probability of default for subprime transactions. Market spreads for bond classes within the same transaction can be used to calculate the likelihood of default on the underlying collateral. And since there are typically multiple bonds within each transaction, there are multiple data points on which to extract a distribution and therefore the likelihood of defaults[3].

Based on information obtained from various sources[4] we calculated the market implied default rate for a given ABX price. Since the lower-rated tranches absorb the first losses from defaults, leaving the higher rated tranches unscathed, their price is the first to react to any increase in defaults on the underlying collateral. This is illustrated in Chart 8 which maps the price profile of the bonds making up the A, BBB and BBB- indices for the 2006 vintage. Note that higher rated bonds can withstand a higher level of collateral loss before experiencing write-downs.

Chart 8

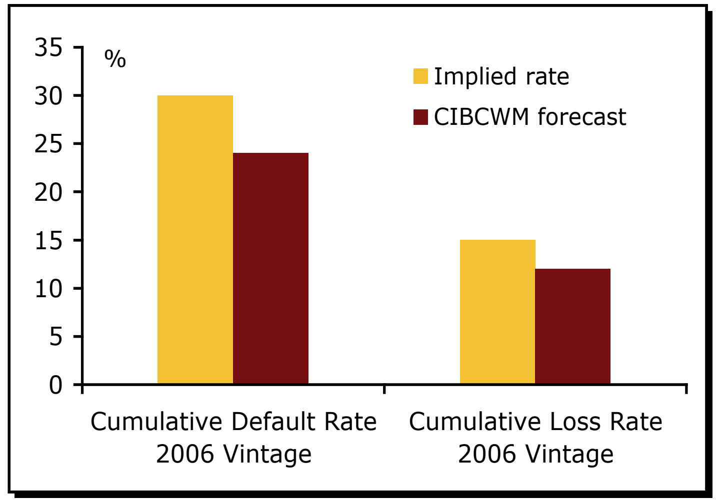
Performance Profile (Avg. ABX 062-071)



CIBCWM calculations based on Markit, Barclays Capital, Credit Suisse and Andrew Davidson & Co, Inc

Chart 9

Mkts Could Be Pricing In Too Much Bad News



Current ABX prices suggest cumulative default rates ranging between 28% for the BBB- rated tranche and 32% for the A rated tranche—for a weighted average of close to 30%. Those implied default rates are roughly 20% higher than our projection (Chart 9)—suggesting that the market is currently pricing in a much more draconian outcome than our main case scenario suggests.

There is no such thing as a bad loan, only bad pricing. And our assessment is that US subprime debt is mispriced by roughly 20%—with higher rated tranches being mispriced the most. This means opportunities not only in the ABX space but also for the MBS and equity markets as a whole, as the subprime default rate will not jump high enough to clear the bar set by the market.

Note:

1. *Source: BasePoint Analytics.*
2. *See our September 20, 2007 issue of StrategEcon. We assume an average prepayment rate of 20% and a cumulative 10% decline in subprime-weighted house prices over the next 4 years.*
3. *For more information, see for example "A Framework for Market — Implied Defaults". Andrew Davidson & Co., Inc. March 2006.*
4. *Data sources: Andrew Davidson & Co, Inc. First American CoreLogic, Markit, Barclays Capital, Credit Suisse and JP Morgan. Results for the 2006-02 vintage were calculated based on Andrew Davidson and results for the 2007-01 vintage were derived based on input from the other sources. We assumed a 50% loan severity rate in estimating recoveries.*