

# So what inning are we in now?

## Re-assessing the subprime mortgage market

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*"I see great things in baseball. It's our game – the American game. It will take our people out-of-doors, fill them with oxygen, give them a larger physical stoicism. Tend to relieve us from being a nervous, dyspeptic set. Repair these losses, and be a blessing to us." — Walt Whitman*

*"Baseball is reassuring. It makes me feel as if the world is not going to blow up." — Sharon Olds*

Last August we published "Subprime strikeout," detailing our views on the subprime residential mortgage-backed securities (RMBS) market. In that commentary, we surveyed subprime mortgage finance over the past decade and then closely examined the crisis that had developed and its implications for the subprime mortgage market.

Much has transpired since last summer. What in July was a subprime RMBS crisis has metamorphosed into a broader financial meltdown. While we could say much about how the crisis spread and about the breadth of its implications, here we would like to continue to focus on the subprime RMBS market, as it remains a key to understanding the performance of financial markets. Real estate in general and subprime RMBS in particular remain at the core of the meltdown, forcing write-downs at major financial institutions and forcing deleveraging across the financial system. We contend that we will not see a normalization in the subprime mortgage finance market until we define a bottom in real estate valuation and stabilize RMBS performance.

### Game summary

*"Baseball is the only field of endeavor where a man can succeed three times out of ten and be considered a good performer." — Ted Williams*

We concluded our analysis in "Subprime strikeout" by articulating our view of the future, focusing on forward-looking subprime performance and its rating

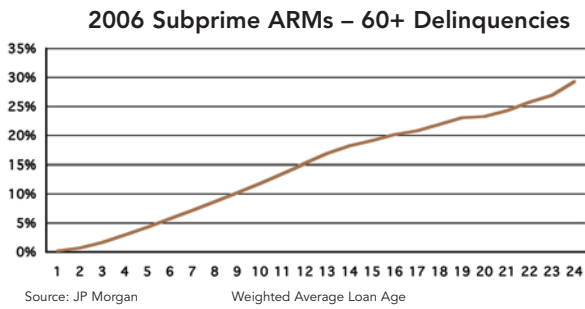
implications. When we asked, "What inning are we in?" last August, we concluded that it was still very early in the game and further performance deterioration and rating agency downgrades were likely. At the time, we reasoned as follows:

- The rating actions taken by the agencies during July 2007 were concentrated on bonds rated Baa1/BBB+ and below. Given both the agencies' propensity for downgrading transactions progressively as performance deteriorates and the more stringent enhancement tests they had enacted, we reasoned further downgrades were coming and that those downgrades would gradually creep up the capital structure.
- At the time we wrote, the rating agencies had not yet subjected 2007 vintage deals to their newly-minted credit standards, and the poor performance of those deals suggested they would experience even more severe downgrades than the 2006 and prior deals that were reviewed in July.
- Rate resets on short-dated hybrid ARMs (the dominant subprime mortgage product in 2005 and 2006) would begin in late 2007 and continue into 2009, putting further stress on borrowers and therefore the performance of securitized transactions.
- Following the interest rate resets, interest-only loans would begin amortizing, again further stressing borrowers' ability to make payments and impairing the performance of securitized transactions.

Our primary predictions were as follows:

**We believed the performance of the 2006 vintage would show little improvement prior to rate resets on the underlying mortgage loans.** As we suspected, performance of the 2006 vintage has continued to deteriorate, as the chart on page 2 indicates.

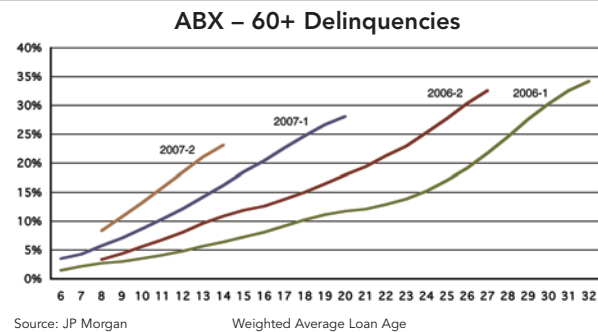
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When we wrote last summer, 60+ day delinquencies for the 2006 vintage as a whole were approximately 20 percent; they are now just shy of 30 percent and continue to trend higher.

We believed the collateral characteristics of 2007 vintage deals were not materially different from the 2006 vintage. Many lenders and investors hoped the 2007 vintage would perform better than the 2006 vintage. This hope was motivated by the fact that some of the most egregious excesses in underwriting were corrected by early 2007. But at the time we wrote, those corrections had not flowed through to significant improvements in collateral performance.

At the time, we noted that performance of the reference obligations underlying ABX 2007-1 was actually worse than the performance for 2006-1 when adjusted for seasoning. This suggested that collateral performance had continued to worsen through the end of 2006, but it provided no direct evidence on 2007 vintage deals.



Now, however, we have enough data on the 2007 vintage to conclude that it presented no improvement over 2006. ABX 2007-2 is the best proxy for the performance of 2007 vintage deals, as it references transactions issued in the first half of 2007. As is clear from the chart above, ABX 2007-2 is the worst performing ABX series. At 14 WALA, the 60+ day delinquency rate for ABX 2007-2 is 23.1 percent.

Its delinquency rate is 1.75 times the delinquency rate of 2007-1 and a stunning 3.6 times the delinquency rate of 2006-1 at like WALA. While the deterioration in the real estate and lending markets should have the deepest impact on the 2007 vintage, performance to date has confirmed our expectation that it was not materially different than the 2006 vintage. In fact, all signs indicate that 2007 will become the worst vintage in subprime history.

Finally, we believed the most significant catalyst for security downgrades lay in reset risk on short-dated hybrid ARMs. Our concerns at the time were fourfold:

- Forward interest rates were higher, such that borrowers' mortgage rates upon refinancing would increase substantially, even if there were no crisis in the subprime market.
- The crisis in the subprime market raised the cost of capital market financing for mortgages significantly, translating into even higher rates for borrowers.
- Subprime mortgage lending standards were substantially tighter, such that many loans originated in 2006 and 2007 would no longer be approved (and, hence, were not refinancable, even at higher rates).
- Almost all forecasts for home price appreciation suggested borrowers would have little equity to extract to help them cope with increased payments.

These views, too, have largely played out and we believe they will continue to drive deterioration in subprime RMBS performance. Because these factors were most significant to our forecast last summer and because they remain key variables, they deserve elaboration.

The subprime RMBS market has shut down. The higher mortgage rates and tighter lending standards we observed last summer were insufficient corrective actions to save the subprime market. There is currently no capital markets execution for subprime RMBS, and as a result, loan origination volumes are a fraction of what they were prior to last summer. The only subprime originators of which we are aware are banks making loans for their retained portfolios; no longer are any originators making loans with the intent to sell loan packages via securitization. This has left the majority of subprime borrowers without a financing or refinancing channel for their homes.

**Home equity is eroding.** Though demand has sustained price levels in certain regions of the country, 2007 saw home prices decline nationally by 9.8 percent, according to the S&P/Case-Shiller Composite Price Index. The January 2008 data just released reported an additional 2.3 percent fall. This brings the cumulative home price decline (since the index peak during the summer of 2006) to 13.4 percent. And housing analysts continue to forecast falling prices.

For borrowers, declining home prices create a lock-in effect. As prices fall, the equity borrowers have in their homes erodes. As equity erodes, borrowers become locked into their homes (because they have insufficient equity to trade up to another home) and can even become locked into their loans (because they have insufficient equity to refinance, particularly as lending standards tighten). This is exactly the opposite situation borrowers experienced from 2002-2006.

For lenders, declining home prices create losses. The first order effect is the realized sale price of liquidated homes: as home prices fall, lenders receive lower prices for liquidated properties and, thus, incur more losses. The second order effect is behavioral: as borrowers' equity declines, their propensity to default increases, creating more inventory to be liquidated, which then sets off a chain-reaction that reinforces the first order effect.

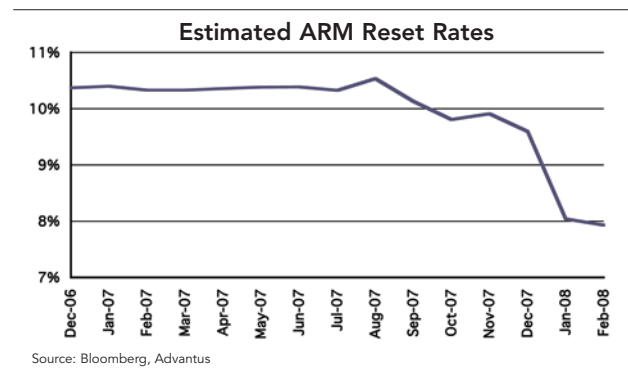
Declining home values, therefore, remain a significant concern for subprime RMBS in particular and capital markets in general.

**Forward interest rates, however, have come down.** The only positive event for subprime borrowers since we last wrote has been the decline in interest rates, specifically in LIBOR rates. Since last summer the Federal Reserve has lowered the target Fed Funds rate from 5.25 percent to 2.25 percent, and six-month LIBOR (the rate off which most subprime RMBS reset) has fallen from approximately 5.3 percent to 2.5 percent.

To understand the implications of these rate changes for subprime borrowers, consider a typical 2006-vintage loan with an 8.2 percent fixed rate for the first 24 months of the loan. On August 1 of last year, had the mortgage rate reset according to the contractual formula, the rate would have increased to approximately 10.3 percent. Such a reset, in rough terms, would have required the borrower to pay an additional 2 percent of his home's value each year just in interest costs. This means that a borrower with a

\$210,000 loan balance (average for the 2006 vintage) would have had to pay an additional \$4,200 per year in interest costs – approaching 10 percent of the average American household's annual income.

Fortunately for borrowers, LIBOR rates have come down such that their rate upon reset now averages approximately 7.5 percent – a modest reduction over their initial fixed rate.



Clearly, this is a positive for subprime borrowers and the subprime RMBS market, as the incremental stress of rate increases has dissipated.

This does not, however, mean borrowers are out of the woods. We remain concerned about the substantial portion of the borrower population whose ability to service their debt is highly questionable. Home prices continue to decline. And initial delinquencies continue to rise, suggesting 60+ day delinquencies will also rise, continuing to place pressure on subprime RMBS transactions.

### **So how will we know when the seventh-inning stretch has arrived?**

*“Why does everybody stand up and sing ‘Take Me Out to the Ballgame’ when they’re already there?”*  
— Larry Anderson

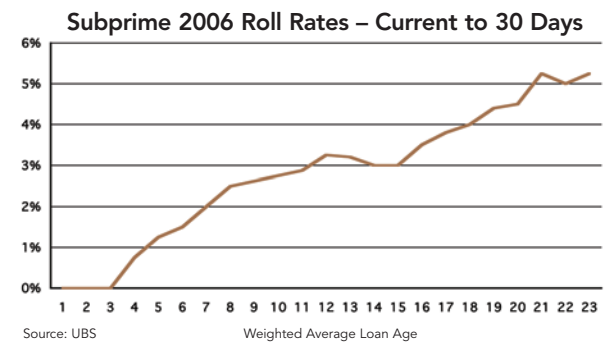
Various attempts have been made to quantify the “bottom” of the subprime market. For our part, we prefer to think of the question as one of when we hit the seventh-inning stretch. By the seventh inning of a ballgame, the tone of the game is typically set – the game may be a slugfest or it may be a pitchers' duel; it may be a close contest or a blowout. Either way, by the seventh inning most of the game is behind you and you typically have good insight into what the final innings will look like.

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We point to three metrics as indicators of the seventh-inning stretch in the subprime crisis.

**30-day delinquencies will fall.** In our commentaries we have focused on 60+ day delinquencies as a measure of deterioration in collateral performance. We have done this with good reason. Borrowers who become 60 days delinquent have a greater than 70 percent chance of becoming even more delinquent, and less than a 30 percent chance of completely repaying the delinquent amounts. Put simply, once a borrower becomes delinquent by 60 days, the outcome is most often default.

But in order to become 60 days delinquent, a borrower must have an initial delinquency. And the most disturbing performance trend amongst borrowers is the increasing rate of initial 30-day delinquencies (the so-called “current-to-30-day roll rate”).

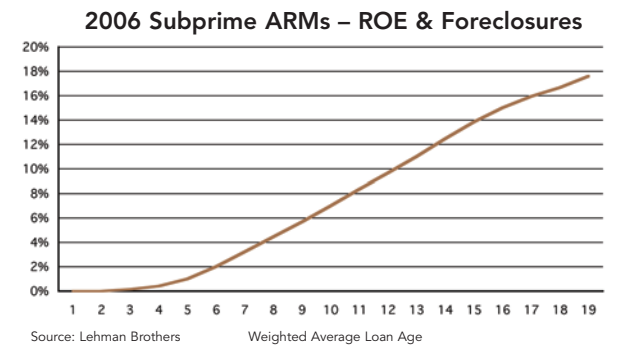


So long as these initial delinquencies continue to increase, more severe delinquencies will increase as well. This implies collateral performance will actually worsen as time progresses. This means higher collateral losses, further price deterioration and more losses to holders of subprime securities. Clearly the occurrence of 30-day delinquencies must fall before we can have transparency about the outcome for the subprime market.

**Repossessed inventory will fall.** Once a borrower has defaulted on his loan and servicers have completed foreclosure, the property becomes real estate owned (REO) by the lender. Currently, REO levels continue to rise across the subprime universe.

Thus far, loan servicers have been slow to liquidate properties. And so long as delinquencies continue to rise, more REO will be created. The ultimate extent of losses will not be known until REO levels are reduced.

Thus it is difficult to have transparency about the outcome for the subprime market without seeing any substantial reduction in REO levels.



**Home valuations will bottom.** Ultimately, the value of real estate will determine the extent of losses to subprime lenders and investors. Currently the real estate market is caught in a vicious cycle. Real estate prices are falling. Falling prices are causing lenders to increase loss expectations. Increasing loss expectations are driving up the cost of capital. Increasing cost of capital is increasing mortgage rates. Rising mortgage rates are decreasing the affordability of homes. Decreasing affordability is forcing declining prices. Then the cycle begins anew. Breaking this cycle by stabilizing home prices is essential to gaining transparency about the outcome for the subprime market.

**Conclusion**

*“It ain’t like football. You can’t make up no trick plays.” — Yogi Berra*

Our concerns from last summer have materialized as a full-fledged capital market meltdown, with the subprime RMBS market at its core. At this point, there are no tricks or simple solutions to the crisis. High losses are “baked into the cake,” substantial write-downs have already been taken and the performance of subprime loans appears poised to worsen. We will keep you updated on our views as they develop.

*This is intended to provide information to institutional investors and their consultants and should not be considered as a recommendation or as investment advice.*