

December 19, 2007

# Standard & Poor's Revised Default And Loss Curves For U.S. Alt-A RMBS Transactions

**Primary Credit Analysts:**

Scott Davey, New York (1) 212-438-2441; [scott\\_davey@standardandpoors.com](mailto:scott_davey@standardandpoors.com)  
Matthew Keenen, New York (1) 212-438-6497; [matthew\\_keenen@standardandpoors.com](mailto:matthew_keenen@standardandpoors.com)

**Secondary Credit Analyst:**

Mark Goldenberg, New York (1) 212-438-1641; [mark\\_goldenberg@standardandpoors.com](mailto:mark_goldenberg@standardandpoors.com)

## Table Of Contents

---

Alt-A Segmentation

Applying The Loss Curves

# Standard & Poor's Revised Default And Loss Curves For U.S. Alt-A RMBS Transactions

The continued deterioration in the U.S. housing market raises specific analytical issues regarding our surveillance of residential mortgage-backed securities (RMBS) collateralized by Alternative-A (Alt-A) residential mortgage loans originated in 2005 and 2006.

These loans have limited seasoning and cumulative losses to date. However, they have delinquency statistics that appear to be much greater than recent trend lines, leaving questions regarding the ultimate magnitude and timing of losses on these vintages (see charts 1 and 2).

Chart 1

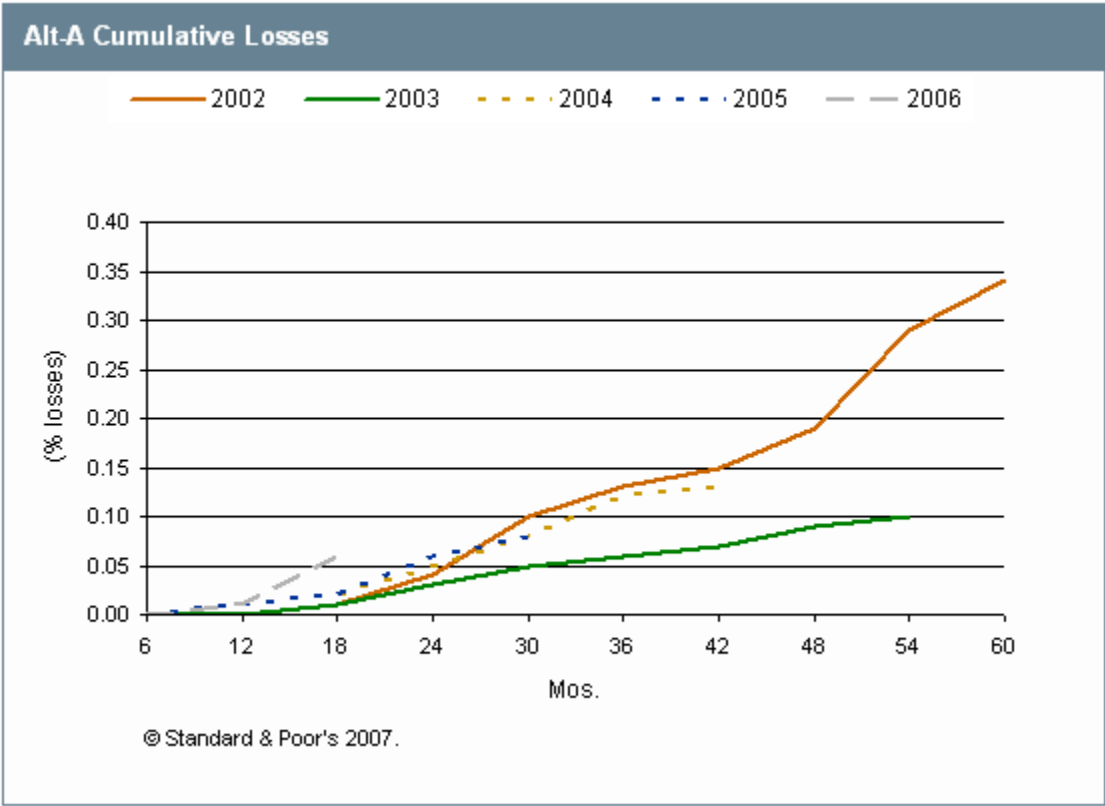
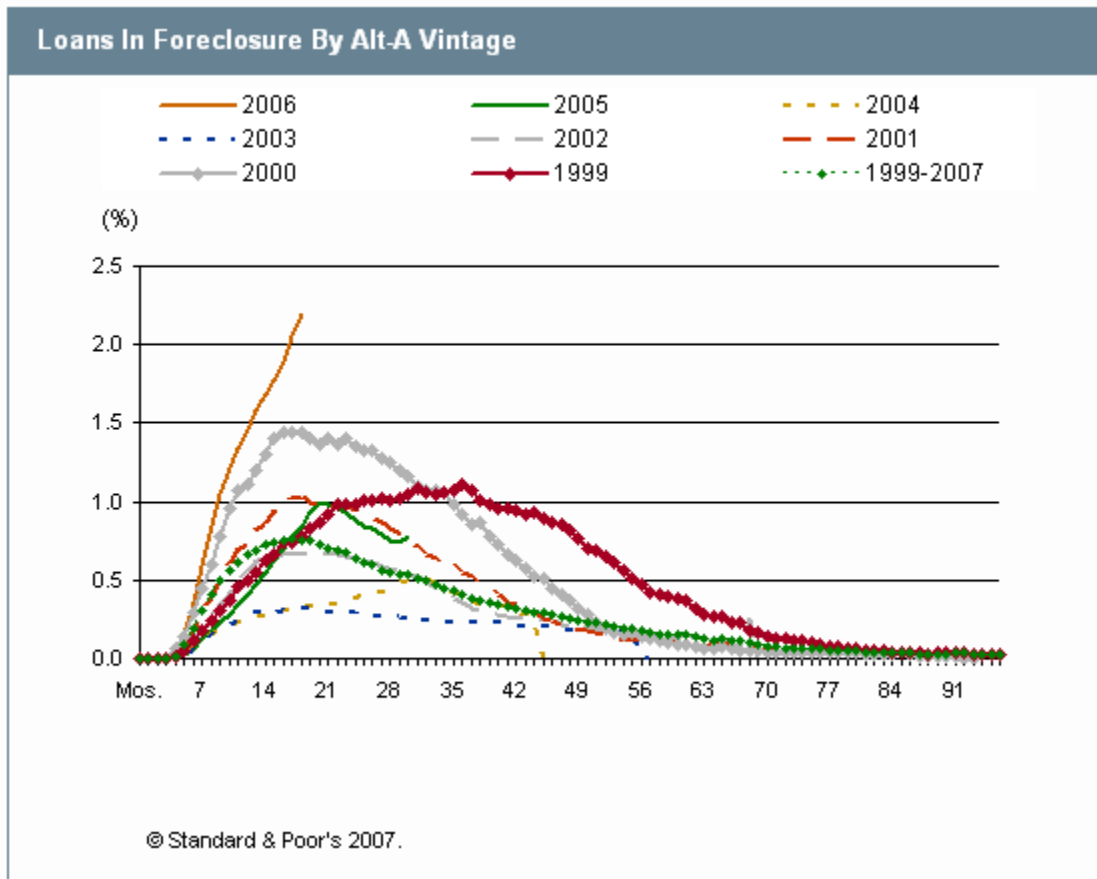


Chart 2



As stated in "Standard & Poor's Revised Default And Loss Curves For U.S. Subprime RMBS," published Oct. 19, 2007, on RatingsDirect, loss curves provide a standardized frame of reference that can be used to compute expected cumulative losses in individual RMBS transactions. Accordingly, we have used loss curves in a similar way to project the cumulative losses on a transaction-by-transaction basis for all RMBS transactions backed by Alt-A loan collateral that we rated in 2005 and 2006. This article provides insight into how we adapted the "loss curve" approach to fit the wide variety of loan types and array of borrower credit qualities that are inherent in the Alt-A market. We also describe how we applied the curves to arrive at the rating actions announced on Dec. 19, 2007 (see, "Ratings Lowered On 1,292 U.S. First-Lien Alt-A U.S. RMBS Classes From 2005 And 2006").

## Alt-A Segmentation

The subprime RMBS market is characterized by transactions that were predominantly collateralized by short-reset (2/28 and 3/27) hybrid adjustable-rate mortgage (ARM) loans that are combined with fixed-rate loans. The loans in the subprime RMBS sector were generally made to borrowers with lower-than-average consumer credit scores. The Alt-A market, in contrast, combines various collateral types, including pay-option ARM loans that allow the borrower to negatively amortize, fixed-rate loans, and both short- and long-reset (5/1, 7/1, or 10/1) ARM loans. As a result, the diversity of the collateral is a chief focus for our new stress methodology for surveillance of RMBS transactions backed by Alt-A mortgage loans. Standard & Poor's believes the loans backing these Alt-A transactions

generally fall into three categories:

- Fixed-rate and longer-dated hybrid ARM loans;
- Negative amortization (pay-option) ARM loans; and
- Short-reset hybrid ARM (2/28 and 3/27) loans.

We believe the diversity of Alt-A collateral has influenced varying default patterns to date, and has shaped our expectations regarding the magnitude and timing of future defaults. There are notable differences between Alt-A collateral types, which are illustrated by borrower credit strength (see table 1). These variances are measured by credit scores and their proximity around the average score, the percentage of residential real-estate investors who hold a certain type of loan as well as the percentage of borrowers within each collateral segment that took out loans with high combined loan-to-value (CLTV) purchase loans, which often contributed to defaults in the 2006 vintage. Using the three mortgage segments we identified, we used a combination of historical and projected performance data to derive unique "foreclosure curves" for each segment, and have forecasted expected defaults by transaction using those curves (chart 3).

**Table 1**

Alt-A Segmentation											
Vintage	Volume (\$)	W.A. FICO	Loans w/FICO < 660 (%)	Loans w/FICO > 720 (%)	Loans w/simultaneous 2nd liens (%)	Verification of income (%)	% of loans in CA	% investor loans	Purchase & CLTV >80 (%)	CLTV>75 & No MI (%)	Not single family (%)
<b>2006</b>											
Alt-A short-reset ARMs	26,479,548,460	688	29.62	26.98	65.59	55.29	37.68	11.96	52.90	64.63	17.10
Alt-A fixed-rate/long-dated ARMs	222,378,946,234	709	16.96	40.51	46.88	61.08	32.73	14.26	35.03	45.58	17.99
Alt-A Neg Am ARMs	146,192,439,130	709	14.37	39.12	34.38	78.20	56.38	23.90	14.55	32.61	15.57

W.A.--weighted average. MI--mortgage insurance. POA--payment-option ARM.

### Fixed-rate and longer-dated hybrid ARM loans

We used the foreclosure rate from the year 2000 as a benchmark for the fixed-rate and longer-dated hybrid ARM transactions. We used this year for several reasons:

- The year 2000 was the most stressful of the past 10 years (excluding 2005 and 2006) in terms of foreclosures. This allowed us to use recent data under extremely stressful market conditions. We expect the losses in 2006 to significantly exceed those experienced in 2000; however, in our opinion, the timing of the losses, and therefore the shape of the loss curve, should be more similar to that of 2000 than to any subsequent year.
- The percentage of pay option ARM and short-reset ARM collateral as compared to fixed-rate/longer-dated hybrid ARMs was significantly less in 2000 than it was in the 2005 and 2006 vintages, making the 2000 vintage foreclosure data a more applicable benchmark for fixed-rate and longer-dated hybrid ARM transactions than for transactions with other collateral types.

The fixed-rate and longer-dated hybrid ARM loans that proved most similar in loan characteristics to the older Alt-A vintages also proved to project the lowest cumulative losses estimates of the three segments. Eighty percent of the transactions we reviewed were projecting losses of between 0.20% and 1.60% for 2005 and between 0.60% and 4.80% for 2006, with the weighted averages falling at 0.85% and 2.55% for 2005 and 2006, respectively. We

attribute the strong performance to the highest concentration, among all three segments, of loans made to borrowers with FICO scores greater than 720 and a limited concentration of investment properties. Nonetheless, we have questions about the performance of this vintage given the following characteristics:

- The high proportion of high-CLTV purchase loans and high-CLTV loans with no mortgage insurance (MI);
- The sizeable proportion of loans made to borrowers with FICO scores below 660 and limited-documentation loans; and
- A substantial percentage of first-lien loans with simultaneous second-lien loans.

Accordingly, and based on rising delinquencies, our loss projection for the 2006 vintage is nearly 3x our projection for the 2005 vintage.

The loss curve for RMBS transactions supported by loans with the characteristics listed above is smoother than other curves, as the loan re-set risk is either at least four years away for some 2006 5/1 hybrid ARM loans, which may allow the property to gain some long-term home price appreciation, increasing the likelihood of successful re-financing options or there is no loan reset risk. Accordingly, we do not expect a spike in defaults around re-set, as we discuss in the segments below, which would affect the shape of the foreclosure rate and ultimately loss curve.

### **Negative amortization (pay-option) ARM loans**

Our negative amortization (Neg Am) curve is based on the limited historical default data available and our expectation of a significant increase in delinquencies associated with the timing of re-cast as loans reach their Neg Am ceilings. The lack of seasoning of the 2005 and 2006 vintage transactions limits the amount of historical data we have on default rates for Neg Am loans. The explosive growth of these loans, most notably in 2006, also limits the value of comparisons between existing information and historical data. We are also wary of historical data because home prices rose sharply before the middle of 2005 and we expect Neg Am loans to default during one of the most stressful periods for residential real estate in the U.S.

In the past 18 months, large lenders consistently reported that nearly 80% of Neg Am loan borrowers were making the minimum payment, which meant that their loans were negatively amortizing. This scenario is consistent with our stress expectations concerning recast of these loans. We have also accelerated the timing of the expected re-cast to reflect the following developments:

- The effect of previous Fed Funds rate increases on the lagging Moving Treasury Average (MTA) index, the most common index for Neg-Am loans;
- Low, initial teaser rates were slow to adjust upward despite Fed Funds increases, resulting in greater Neg Am than if the teaser rates had been higher;
- Higher margin rates associated with borrowers with lower credit scores; and
- The anticipated effect of negatively amortizing loan amounts on a borrower's decision to default, which may occur before a loan re-casts in an environment characterized by negative home price appreciation.

As a result of our presumed spike in the curve around the expected loan re-cast time for Neg Am transactions, we were able to stress the delinquency pipelines of Neg Am backed RMBS, which tended to have severe delinquencies below the Alt-A universe average. Our curve has allowed us to project a weighted average cumulative loss projection of 1.50% for 2005 and 4.80% for 2006. We note that approximately 80% of the cumulative losses for 2005 were projecting between 0.70% and 3.00%, whereas nearly 80% of the cumulative loss estimates for 2006 were between

3.50% and 5.75%. Our much higher projection for the 2006 vintage reflects our view that about the high investor loan concentration, very high concentration of verbal verification of income at underwriting, and large concentration of loans in California may negatively affect credit quality. Also, we do not expect the higher paydown activity seen in the 2005 vintage to be repeated for the 2006 vintage, given the declining home price appreciation environment.

**Short-reset hybrid ARM (2/28 and 3/27) loans**

Both of the short re-set ARM curves are based on the "2005 and 2006 subprime" loss curves we described in "Standard & Poor's Revised Default And Loss Curves For U.S. Subprime RMBS," published Oct. 19, 2007. We used the subprime curves for this segment of the Alt-A market because of the many similar characteristics between Alt-A and subprime loans. Additionally, early performance indications suggest that Alt-A and subprime loans will also exhibit similar delinquency performance. We used the rates of change in the subprime curve in our analysis to provide different cumulative loss projections for the Alt-A and subprime segments.

The subprime curves, as described in the Oct. 19, 2007, article, are meant to stress the likelihood of default given expected interest rate resets to higher loan coupons within a short period of time, making it difficult for the borrower to recoup much of the lost value in a declining home price appreciation environment. Given the higher proportion of borrowers with credit scores below 660, the lower overall weighted average FICO scores, and very high concentrations of both borrowers with simultaneous second-lien loans and verbal verification of income at underwriting, we expect this segment of the Alt-A market to experience the highest loan losses. Our cumulative loss estimates are 5.25% for 2005 and 6.75% for 2006. We note that 80% of cumulative loss projections are between 1.75% and 8.75% for 2005 and between 3.90% and 11.25% for 2006. While this segment of the Alt-A market has the highest overall projected losses, the rate of increase between 2005 and 2006 in our projections does not increase as much as in the other segments because the heavy delinquency pipelines to date for both 2005 and 2006 transactions constrain the ultimate projections, given pool factor considerations.

Chart 3

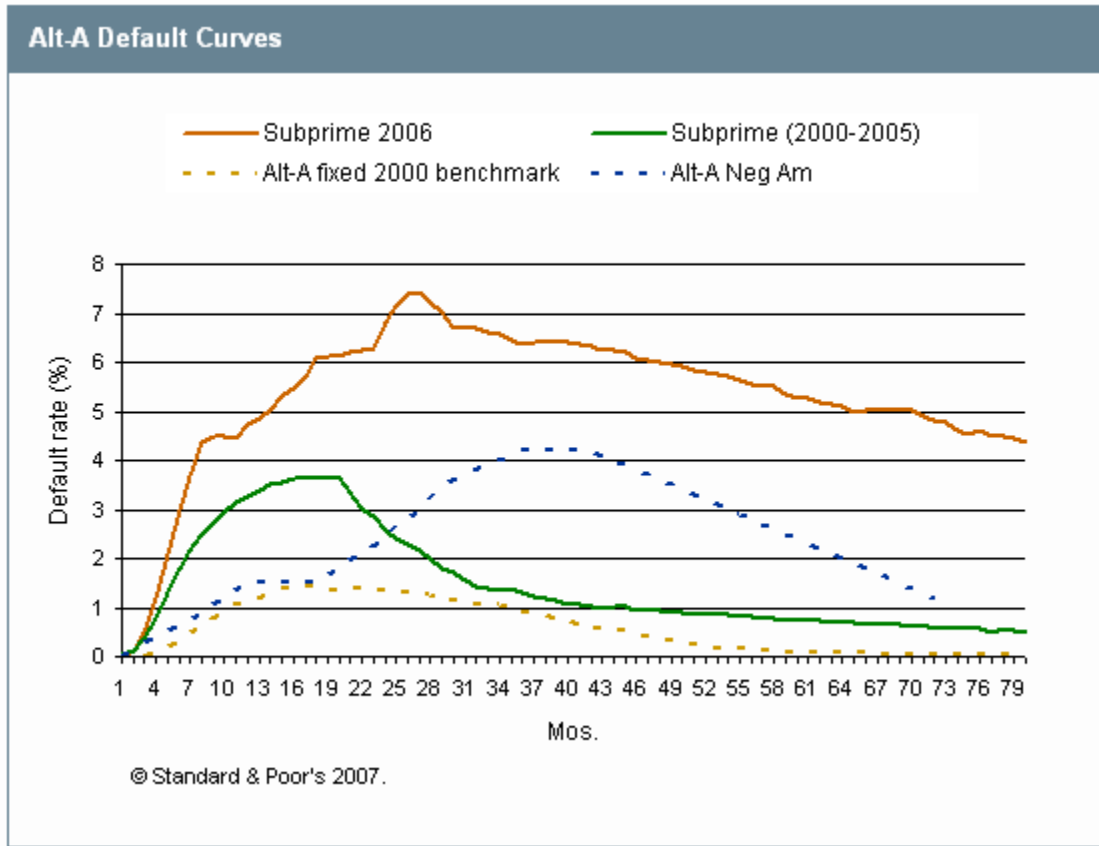
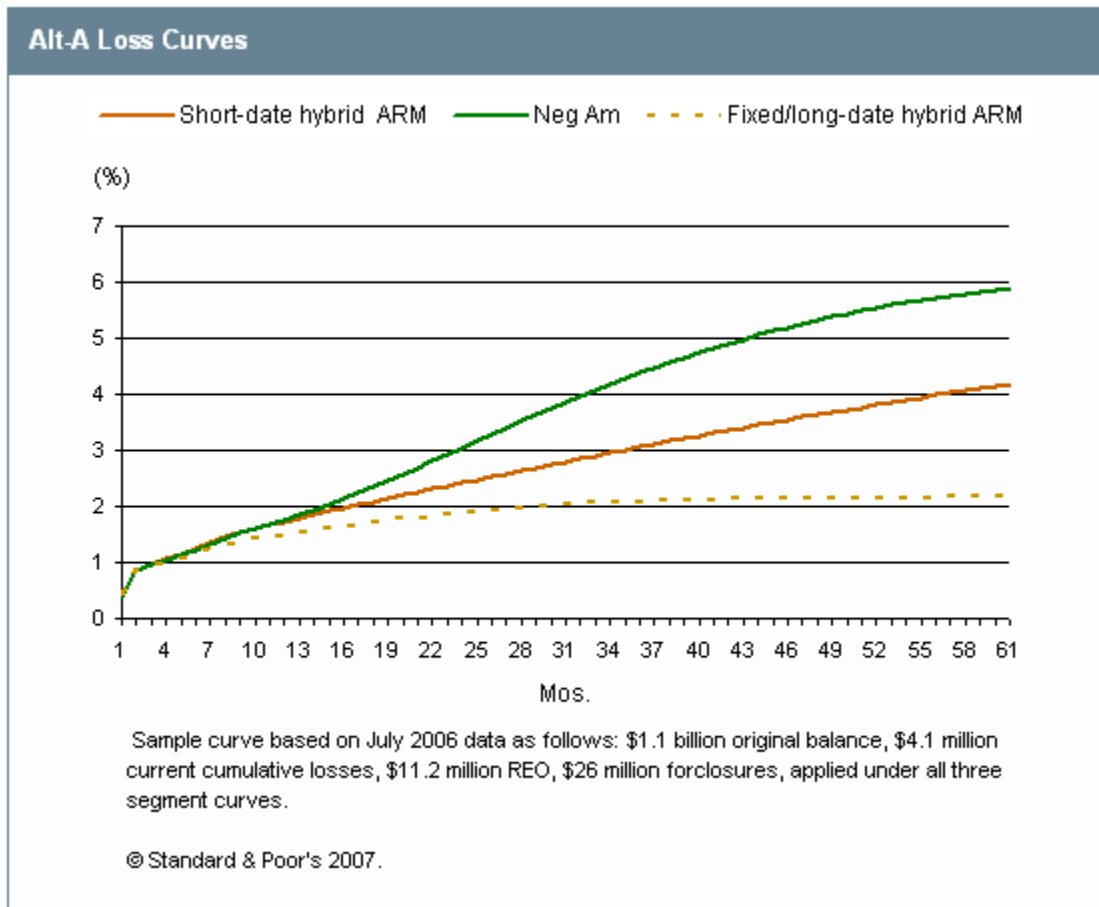


Chart 4



## Applying The Loss Curves

In conducting our expected loss forecast, we multiplied the current foreclosure amount of each individual structure by the rate of change that the foreclosure curve forecasted for the following periods. Next, consistent with our updated liquidation assumptions for subprime transactions, we assumed liquidation of 1/15th of the projected foreclosure amount and applied our updated severity estimates for Alt-A to come to a loss amount for each period (table 2). Finally, we assumed that the loans that are currently real estate owned would be liquidated in equal amounts over the first eight periods and then added that amount to projected loss from foreclosure to arrive at our final loss forecast (chart 4).

Table 2

Severity Assumptions	Quarter transaction closed	
	Q1 2005 to Q3 2005	Q4 2005 to Q42006
Alt-A 2/28 & 3-27 ARM (%)	25.00	28.00
Alt-A short reset (%)	32.00	35.00
Alt-A Neg Am (%)	30.00	33.00

Copyright © 2007, Standard & Poors, a division of The McGraw-Hill Companies, Inc. (S&P). S&P and/or its third party licensors have exclusive proprietary rights in the data or information provided herein. This data/information may only be used internally for business purposes and shall not be used for any unlawful or unauthorized purposes. Dissemination, distribution or reproduction of this data/information in any form is strictly prohibited except with the prior written permission of S&P. Because of the possibility of human or mechanical error by S&P, its affiliates or its third party licensors, S&P, its affiliates and its third party licensors do not guarantee the accuracy, adequacy, completeness or availability of any information and is not responsible for any errors or omissions or for the results obtained from the use of such information. S&P GIVES NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. In no event shall S&P, its affiliates and its third party licensors be liable for any direct, indirect, special or consequential damages in connection with subscribers or others use of the data/information contained herein. Access to the data or information contained herein is subject to termination in the event any agreement with a third-party of information or software is terminated.

Analytic services provided by Standard & Poor's Ratings Services (Ratings Services) are the result of separate activities designed to preserve the independence and objectivity of ratings opinions. The credit ratings and observations contained herein are solely statements of opinion and not statements of fact or recommendations to purchase, hold, or sell any securities or make any other investment decisions. Accordingly, any user of the information contained herein should not rely on any credit rating or other opinion contained herein in making any investment decision. Ratings are based on information received by Ratings Services. Other divisions of Standard & Poor's may have information that is not available to Ratings Services. Standard & Poor's has established policies and procedures to maintain the confidentiality of non-public information received during the ratings process.

Ratings Services receives compensation for its ratings. Such compensation is normally paid either by the issuers of such securities or third parties participating in marketing the securities. While Standard & Poor's reserves the right to disseminate the rating, it receives no payment for doing so, except for subscriptions to its publications. Additional information about our ratings fees is available at [www.standardandpoors.com/usratingsfees](http://www.standardandpoors.com/usratingsfees).

Any Passwords/user IDs issued by S&P to users are single user-dedicated and may ONLY be used by the individual to whom they have been assigned. No sharing of passwords/user IDs and no simultaneous access via the same password/user ID is permitted. To reprint, translate, or use the data or information other than as provided herein, contact Client Services, 55 Water Street, New York, NY 10041; (1)212.438.9823 or by e-mail to: [research\\_request@standardandpoors.com](mailto:research_request@standardandpoors.com).