

Summary of Changes to S&P's LEVELS Model (2001-2008)

	Date	Change to LEVELS Model
1	March 2001	<p>LEVELS Version 5.4.2</p> <ul style="list-style-type: none"> • LEVELS version 5.4.2 incorporated updated new rating criteria for simultaneous second lien mortgages, hybrid adjustable-rate mortgage loans, and subprime loans; and • An updated version of Standard & Poor's Economic Index, which adjusts for projected real estate price fluctuations.
2	June 2001	<p>LEVELS Version 5.4.2(a)</p> <ul style="list-style-type: none"> • LEVELS version 5.4.2(a) reflected refined adjustments to the multipliers used to calculate foreclosure frequency through various rating categories.
3	April 2002	<p>LEVELS Version 5.5</p> <ul style="list-style-type: none"> • LEVELS version 5.5 reflected criteria revisions and several performance enhancements, including the new Standard & Poor's House-Price Volatility Index which measures the likelihood of a price decline over the upcoming three-year period based on the historical distribution of price changes, and measures the long-term growth and volatility of housing prices.
4	October 2003	<p>LEVELS Version 5.6</p> <ul style="list-style-type: none"> • LEVELS version 5.6 included an updated Housing Volatility Index, incorporating a groundbreaking and innovative methodology for measuring housing price volatility at the metropolitan statistical area level. • Additional loan level data elements requested. • New stress assumptions for manufactured housing added to the model. • Revised Loss Severity Model with new data related to time to initiate foreclosure; time to foreclose; bankruptcy delays, eviction delays, preservation costs, legal costs, amounts escrowed for taxes and insurance, brokerage costs; and appraisal and lien search.
5	September 2004	<p>Levels Version 5.6(a)</p> <ul style="list-style-type: none"> • New methodology instituted for foreclosure frequency multiple.

6	December 2004	<p>LEVELS Version 5.6(b)</p> <ul style="list-style-type: none"> • LEVELS version 5.6(b) reflected criteria changes, including: <ul style="list-style-type: none"> ○ New foreclosure frequency adjustments for certain one-month, six-month, and 12-month adjustable-rate mortgage (ARM) loans; ○ Modification of the loss severity calculation for certain one-month, six-month, and 12-month ARM loans; ○ Adjustments to the foreclosure frequency calculation of certain interest-only loans based on the borrower's FICO score; ○ Updates to the Standard & Poor's Housing Volatility Index; and ○ Updates to the Standard & Poor's House Price Index.
7	July 2005	<p>LEVELS Version 5.6(c)</p> <ul style="list-style-type: none"> • LEVELS version 5.6(c) included the following changes: <ul style="list-style-type: none"> ○ Modifications to Standard & Poor's LEVELS Version 5.6(c)'s Residential Mortgage Input File Format, including a loan type code for fixed-rate, interest-only loans, the acceptance of several new appraisal forms, and a new list of reviewed automated valuation models; ○ Incorporation of updated criteria for negative-amortizing option adjustable-rate mortgage loans; ○ The ability to recalculate the loan-to-value ratio ("LTV") of a non-seasoned loan if a curtailment has been made on that loan; ○ A new methodology for analyzing credit enhancement levels for a small pool of loans; ○ A shift from using metropolitan statistical areas to using core-based statistical areas in conjunction with the Standard & Poor's House Price Index; and ○ An update of Standard & Poor's House Price Index with Office of Federal Housing Enterprise Oversight data from first-quarter 2005.
8	February 2006	<p>LEVELS Version 5.6(d)</p> <ul style="list-style-type: none"> • LEVELS version 5.6(d) included the following changes:

		<ul style="list-style-type: none"> ○ A 50% assumed discount to the increase in a property's appraised value calculated by Standard & Poor's House Price Index if the data shows that appreciation has occurred; ○ Adjustments to the calculation of loan-to-value for Option ARM loans that have experienced negative amortization; ○ Standard & Poor's House Price Index was updated with Office of Federal Housing Enterprise Oversight data from third-quarter 2005.
9	April 2006	<p>LEVELS Version 5.7</p> <ul style="list-style-type: none"> ● LEVELS version 5.7 included the following changes: <ul style="list-style-type: none"> ○ Adjusted foreclosure frequency of first lien with simultaneous second lien loans; ○ An increase in base case foreclosure frequency assumptions for poor quality loans due to increased risk layering; ○ Adjustment to certain assumptions made with respect to extremely high quality loans; and ○ Updated House Price Volatility Index, which increase loss severity and, consequently, loss coverage levels.
10	March 2007	<p>LEVELS Version 6.0</p> <ul style="list-style-type: none"> ● LEVELS version 6.0 included the following changes: <ul style="list-style-type: none"> ○ Use of combined loan-to-value ("CLTV") in analyzing the probability of default (instead of first-lien LTV with a simultaneous second-lien penalty) for first-lien loans with simultaneous seconds; and ○ Increased emphasis on combined loan-to-value and FICO in analyzing probability of default. For example, assigning the same probability of default to 80% LTV first-lien loans with a 20% simultaneous second lien (80/20 loans) as assigned to 100% LTV loans.
11	November 2007	<p>LEVELS Version 6.1</p> <ul style="list-style-type: none"> ● LEVELS version 6.1 reflected changes to S&P's credit enhancement assumptions for first-lien, and closed-end second-lien, prime, Alt-A, and subprime transactions.

		<p>Changes from LEVELS 6.0 included the following:</p> <ul style="list-style-type: none"> ○ Reduced emphasis on FICO scores for loans with high levels of layered risk, which would generally result in higher assumed foreclosure frequency; ○ Increased foreclosure frequency assumptions for two-year hybrid ARM loans, low-FICO/high-CLTV purchase loans, and loans with no income documentation; and ○ Incorporation of newly released Office of Federal Housing Enterprise Oversight house price data into Standard & Poor’s Housing Volatility Index. Depending on geographic dispersion, this could result in increased loss severity and loss coverage levels.
12	January 2008	<p>LEVELS Version 6.2</p> <ul style="list-style-type: none"> ● LEVELS version 6.2 included the following changes: <ul style="list-style-type: none"> ○ Loans coded with unknown appraisal type are assessed with a 100% foreclosure frequency; and ○ Adjustments to the ratings of primary mortgage insurers which have an impact on loss severity.
13	March 2008	<p>LEVELS Version 6.3</p> <ul style="list-style-type: none"> ● LEVELS version 6.3 reflected revisions to certain ratings assumptions resulting in changes to credit enhancement levels for first-lien and closed-end, second-lien prime, Alternative-A, and subprime transactions. Changes in the LEVELS 6.3 release included: <ul style="list-style-type: none"> ○ Increased functionality with respect to home equity line of credit (HELOC) loans; ○ Adjustments to delinquency assumptions; ○ Update to loss severity assumptions based on certain state foreclosure timeline extensions; ○ Updates to data regarding the rating levels of mortgage insurers; and ○ Updates to Standard & Poor’s House Price Index with recent Office of Federal Housing Enterprise Oversight data

14	July 2008	<p>LEVELS Version 6.4.3</p> <ul style="list-style-type: none">• LEVELS version 6.4.3 included the following changes:<ul style="list-style-type: none">○ Adjustments to the loan-level probability of default assumptions for certain loan types, including short-term hybrid adjustable-rate mortgage loans, interest-only mortgage loans, and mortgage loans that allow for negative amortization;○ Updates to Standard & Poor's House Price Index with data from the Office of Federal Housing Enterprise Oversight for the first quarter of 2008;○ Revisions to the Housing Volatility Index;○ Adjustments to the impact of loan-to-value ratios and combined loan-to-value ratios on credit enhancement; and○ Revisions to loan-level adjustments for credit enhancement from the inclusion of primary mortgage insurance.
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