STANDARD & POOR'S
RATINGS SERVICES
McGRAW HILL FINANCIAL

RatingsDirect®

Criteria | Structured Finance | RMBS:

U.K. RMBS Methodology And Assumptions

Criteria Officer, EMEA Structured Finance:
Herve-Pierre P Flammier, Paris (33) 1-4420-7338; herve-pierre.flammier@standardandpoors.com

Criteria Officer, Global RMBS:
Fabienne Michaux, Melbourne (61) 3-9631-2050; fabienne_michaux@standardandpoors.com

Chief Credit Officer, EMEA Ratings:
Lapo Guadagnuolo, London (44) 20-7176-3507; lapo_guadagnuolo@standardandpoors.com

Chief Credit Officer, Structured Finance Ratings:
Felix E Herrera, CFA, New York (1) 212-438-2485; felix_herrera@standardandpoors.com

Table Of Contents

Table Of Contents (cont.)

Criteria | Structured Finance | RMBS:

U.K. RMBS Methodology And Assumptions

*(**Editor's Note:** We originally published this crtieria article on Dec. 9, 2011. We're republishing it following our periodic review completed on Dec. 23, 2013.*

Since we originally published this criteria article on Dec. 9, 2011, we have updated paragraphs 135, 218, and 227. No outstanding ratings will change as a result of these updates. This article has been partially superseded by the criteria article titled,"Methodology For Applying RMBS Small Pool Adjustment Factor", published May 24, 2012, as referenced in paragraph 135. This criteria article superseded the articles listed in paragraph 4 and partly superseded the articles listed in paragraph 5.)

1. Standard & Poor's Ratings Services is updating its methodology and assumptions for rating U.K. residential mortgage-backed securities (RMBS). This update follows our request for comment "U.K. RMBS Methodology And Assumptions," published Sept. 15, 2011.

2. The changes align the criteria for U.K. RMBS closely with the global RMBS framework.

3. This article discusses two fundamental principles of structured finance ratings and criteria: (i) the credit quality of the securitized assets and (ii) the payment structure and cash flow mechanics. These two principles form part of the "Principles Of Credit Ratings," published Feb. 16, 2011.

4. This criteria article supersedes:

   - "Revised Criteria For Rating U.K. Residential Mortgage-Backed Securities," published July 5, 2001;
   - "Methodology And Assumptions: Update To The Criteria For Rating U.K. Residential Mortgage-Backed Securities," published Jan. 6, 2009; and
   - "Guidelines For The Use Of Automated Valuation Models For U.K. RMBS Transactions," published Sept. 26, 2005.

5. This criteria article partly supersedes:

   - "Cash Flow Criteria For European RMBS Transactions," published Nov. 20, 2003 (relating to U.K. RMBS); and
   - "Methodology And Assumptions: Update To The Cash Flow Criteria For European RMBS Transactions," published Jan. 6, 2009 (relating to U.K. RMBS).

I. SCOPE OF THE CRITERIA

6. These criteria apply to all new and existing ratings on U.K. RMBS and to the analysis of U.K. residential mortgage-covered bonds.

7. The criteria constitute a starting point for assessing portfolios that vary substantially from historical pools and for analyzing structures that pose unique risks.

II. SUMMARY OF THE CRITERIA

8. These criteria: (i) adopt the global framework and methodology for analyzing the credit quality of RMBS (see ¶¶9-22 and ¶¶26-27) and (ii) revise the modeling and cash flow assumptions for typical U.K. RMBS transactions (¶¶23-25).

9. The global framework and criteria are described in "Methodology And Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans," published Sept. 10, 2009, and in "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011.

10. The revised criteria embody our aim to enhance the rating analytics and comparability of RMBS ratings globally and across sectors.

11. As with the global RMBS criteria, an archetypical mortgage loan pool serves as a benchmark for actual pools underlying RMBS transactions, allowing for an estimation of credit enhancement levels.

12. Credit enhancement equates to an estimation of potential losses in a mortgage loan pool underlying an RMBS under various stress scenarios.

13. The alignment of these criteria with the global RMBS criteria increases credit enhancement levels for U.K. RMBS in all rating categories.

14. The archetypical pool for U.K. RMBS includes:

- At least 250 loans that are geographically distributed across the U.K.
- Loans that are up to date and have been outstanding for no more than 60 months.
- Loans that will be fully amortized or are long-term interest-only loans with terms of at least 10 years that carry a floating rate, have no initial interest-discount period, and the originator has verified the borrower's income.
- Loans to finance the purchase of a property for the owner's occupation or to refinance the balance on an existing loan (and the lender has fully reunderwritten the loan).
- Loans secured by a first-lien mortgage on the property financed with the loan proceeds.
- Loans to borrowers that are not first-time buyers, have no adverse credit history, such as county court judgments, previous bankruptcies, or individual voluntary arrangements, and whose income multiple (loan size divided by borrower's annual pretax income) is no more than 3.5x.
- Loans granted at a loan to value ratio of 73%.
- Loans with full valuations on the mortgaged property from a real estate appraiser that are not "jumbo" valuations (i.e. exceeding £312,500 in North U.K. and £500,000 in South U.K.).

15. The criteria set credit enhancement at 6% as an "anchor" for an archetypical U.K. mortgage loan pool underlying RMBS at the 'AAA' rating level.

16. The 'AAA' credit enhancement anchor of 6% compares with similar anchors at the 'AAA' level in the global RMBS criteria: (i) 7.5% for the archetypical U.S. mortgage loan pool, and (ii) 5% for the archetypical Australian pool. The 'AAA' credit enhancement anchor in the U.K. RMBS criteria differs from the anchors in the global criteria because of: (i) the local attributes of the archetypical U.K. pool and (ii) the environment for RMBS transactions, stemming from the British legal system and the structural features of the U.K. mortgage market. The calibration of the 'AAA' credit

enhancement anchor draws from historical scenarios of extreme stress.

17. The criteria apply adjustment factors for nonarchetypical U.K. pools, resulting in different credit enhancement levels from that of the archetype. Nonarchetypical pools are those with characteristics that differ from the U.K. archetype's. These criteria set adjustment factors for nonarchetypical U.K. pools (see table 1). Appendix 1 depicts sample calculations.

Table 1

Adjustment Factors For Nonarchetypical Loan Characteristics

Criteria paragraph(s)	Loan characteristic	Adjustment factor
84-90	Negative credit history	1) A multiple of between 1.075x and 4x for county court judgments (CCJs), depending on the number of judgments and the age of a CCJ
		2) A default frequency of 50%, subject to some but not all adjustments in this table, for previous bankruptcies and individual voluntary arrangements
91-93	Original loan to value (OLTV)	A multiple that increases incrementally from 0.5x, for loans with an OLTV <= 40%. The adjustment is 1.0x for loans with an OLTV of 73%
94-103	Income multiple (loan size divided by a borrower's annual pretax income)	A multiple of 1.0x, 1.2x, or 1.5x, depending on the income level relative to the loan size, as well as the loan's elapsed term and performance
104-107	Elapsed loan term (seasoning)	0.75x for seasoning >5 and <=6 years
		0.70x for seasoning >6 and <=7 years
		0.65x for seasoning >7 and <=8 years
		0.60x for seasoning >8 and <=9 years
		0.55x for seasoning >9 and <=10 years
		0.50x for seasoning >10 years
		(These adjustments only apply to loans that are not in arrears)
108-109	First-time buyer	A multiple of 1.1x
		This multiple is removed when loan is performing and loan seasoning is more than 18 months
110-112	Short-term interest-only loans (with an initial term of less than 10 years)	A multiple of 1.5x
113-121	Self-certification of income	A multiple of 1.5x
		Removed gradually starting from loan seasoning of >12 months
		No income multiple adjustment factor
122-124	Remortgage loans/refinancing mortgage loans	A multiple of 1.1x for refinancing (1.0x if full reunderwriting applies)
		A multiple of 1.2x for cash-outs
125-130	Buy-to-let loans	A multiple of between 1.3x and 1.7x, depending on the debt-service coverage ratio (DSCR) of the property yield
		A multiple of 1.7x, absent adequate DSCR data or if the loan is otherwise underwritten
		No income multiple adjustment factor, unless the loan underwriting is based on income only
131	Jumbo loan size	Adjustment to jumbo valuation
132-133	Payment shock (a sudden rise in monthly payments)	A multiple of 1.2x for mortgage loans with a temporary promotional or fixed rate (applies until six months after expected shock date)
134	Second-lien mortgage loan	A multiple of 1.67x

Table 1

Adjustment Factors For Nonarchetypical Loan Characteristics (cont.)		
147-148	Geographic concentration	A multiple of 1.05x for concentration in any region, depending on region-specific concentration limits
		A multiple of 1.5x for postcode concentrations in excess of 2%
149-161	Mortgage loan arrears	Arrears matrix
162-167	Pool-level adjustment, including adjustment for master trust structures	A multiple of 0.7x to 1.3x (This adjustment accounts for increased or reduced portfolio risks)
140-146		A multiple of 1.5x for long-term interest-only loans (with an initial term of at least 10 years) in excess of 50% of a pool
135-139		A small-pool adjustment (if pool initially comprises <250 loans)
168-170	Jumbo valuation	A multiple of up to 1.2x to market-value decline (for valuations > £312,500 in North U.K. or >£500,000 in South U.K.)
171-174	Valuation haircut	Haircut of 5.0% to any valuation other than full appraisals, for loss severity calculations only
180	Maximum foreclosure frequency	100% at loan and pool level

18. The criteria reflect Standard & Poor's outlook on the U.K. mortgage and credit markets by matching estimates of probable losses in a pool to the 'B' credit enhancement level.

19. This means that the 'AAA' credit enhancement for an archetypical pool remains constant throughout normal economic cycles, but the 'B' credit enhancement will fluctuate with changes in the outlook.

20. The credit enhancement at the 'AA+' to 'B+' rating levels are interpolated from the 'AAA' and 'B' credit enhancements and therefore tend to vary with changes in the outlook.

21. The criteria set credit enhancement for the archetypical U.K. pool at various rating levels, given a stable or improving market outlook (i.e. benign starting conditions) and a property market at equilibrium (see table 2).

22. The credit enhancement level as a percentage of the loan balance breaks down into two components: (i) foreclosure frequency (i.e. an estimate of loan defaults/foreclosures in a pool) and (ii) loss severity (i.e. the probable loss on repossession and sale).

Table 2

Credit Enhancement For The Archetypical U.K. Pool Under Benign Starting Conditions			
Rating category	**Credit enhancement level (%)**	**Foreclosure frequency component (%)**	**Loss severity component (%)**
AAA	6.0	12.0	50.0
AA	3.9	8.0	48.5
A	2.4	6.0	40.0
BBB	1.4	4.0	34.5
BB	0.6	2.0	30.5
B	0.4	1.5	28.0

23. The analysis of U.K. RMBS includes an analysis of a transaction's payment structure and cash flow mechanics.

24. Quantitative models help assess the adequacy of cash flows from the securitized assets to meet timely payments of interest and principal on an RMBS issue in stress scenarios commensurate with the applicable rating level. This is after

taking into account the available credit enhancement and allowing for transaction expenses such as servicing and trustee fees. For modeling purposes, the criteria adjust the computation of market-value decline and loss severity estimates. This means that, in addition to a recessionary decline, modeling specifically incorporates an adjustment to estimate the degree of over- or undervaluation in the property market, as well as a forced-sale discount. Estimates of regional or nationwide over- or undervaluation come from comparing the prevailing house-price-to-income ratio against the long-term trend, assuming low annual growth of this ratio.

25. The criteria establish several cash flow assumptions for modeling typical U.K. RMBS structures (see table 3).

Table 3

Cash Flow Modeling Parameters For U.K. RMBS

Criteria paragraph(s)	Modeling variables	Modeling parameters
214-217	Amount of defaults and recoveries	Periodic application of front-loaded and back-loaded default curves matching the payment profile of underlying assets*
218-220	Recession timing	Two different start points: at inception and at the end of year three
221-223	Timing of recoveries	Foreclosure periods of (i) 18 months for archetypical loans, (ii) 12 months for most buy-to-let loans, and (iii) 21 months for second-lien loans
224-225	Delinquencies	Payment delays equivalent to one-third of the pool's foreclosure frequency for scheduled interest and principal
226-227	Interest rate risk	Five interest rate curve paths: (i) up, (ii) down, (iii) up/down, (iv) down/up, and (v) forward
228-236	Basis risk	A rating-specific stress during the first 18 months of a recession and a constant 'B' stress at the 30% percentile at all other times
237-245	Prepayment rates	Different assumptions depending on the rating level: (i) high and forecast for all rating levels, (ii) high, low, and forecast for the 'AAA' and 'AA' level
		A recessionary level for the duration of the recession at all rating levels
246-247	Reinvestment rates	A rating-specific margin applies, with a reinvestment rate floor of 0%
248-254	Originator insolvency: commingling and set-off	Commingled and set-off amounts depend on individual characteristics
255-258	Fees and expenses paid before settling rated debt	Modeling of servicing fees uses a minimum stressed cost of 35 basis points (bps) or 50bps, depending on the loan type
202	Mortgage loan foreclosure costs	4% of loan balance for first-lien loans and 6% for second-lien loans as part of the loss severity estimates
259-261	Liquidity facilities	Assumed fully drawn as of day 60, with the issuer paying the drawn fee
262-263	Pool yield compression	Spread compression depends on individual pool characteristics
265-271	Cash flow assumptions specific to master trust structures relating to testing credit, liquidity, and the timing of recessions	Several combinations of possible scenarios (e.g. solvency and insolvency of the bank) to reflect structural features such as asset and nonasset triggers
272-274		Specific runs to test e.g., repayment of hard bullet securities
275-277		Specific runs to test e.g., repayment of liabilities issued with different legal final maturity dates

*Front-loaded (i.e. concentrated toward the earlier stage of a transaction). Back-loaded (i.e. concentrated toward the later stage of a transaction).

26. If the attributes of an actual asset pool indicate better credit quality than the archetype, the pool's credit enhancement

could be lower than those in Table 2.

27. If this is the case, the criteria set a "floor" or minimum credit enhancement of 4% at the 'AAA' rating level and 0.35% at the 'B' level.

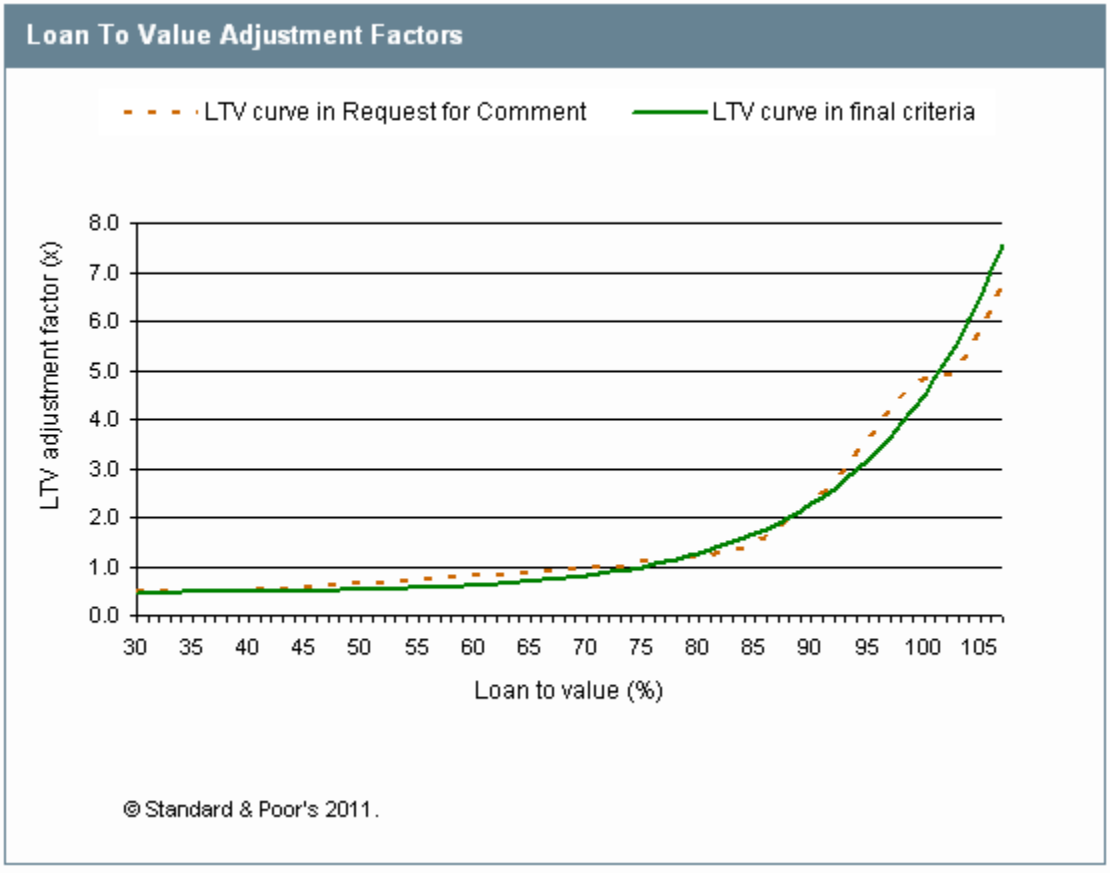
III. CHANGES FROM THE REQUEST FOR COMMENT

28. These criteria include changes from the request for comment (RFC) published on Sept. 15, 2011, as well as clarifications in response to feedback from market participants during the consultation process. The criteria contain enhancements to certain aspects of the RFC proposal and further alignment to the global RMBS criteria.

29. The following five changes from the RFC relate to adjustment factors and modeling assumptions.

- First, the curve showing the adjustment factor at various loan to value (LTV) ratios is smoother than in the RFC (see chart 1). The shape of this curve is now identical with that of the equivalent curve in the Australian RMBS criteria. The smoothing function addresses the gradual increase of credit risk as LTV levels rise (see ¶¶91-93).

Chart 1



- Second, these criteria align with the criteria for Australian RMBS by applying a neutral adjustment of 1.0x for fully reunderwritten refinancing loans (see ¶¶122-123). By contrast, the RFC proposed an adjustment factor of 1.1x. The

reason for the change is that some remortgage loans in the U.K. are purely for refinancing and the lender fully reunderwrites the loan, which includes a reappraisal of the mortgaged property. Similar situations occur in other markets, like Australia.

- Third, these criteria use a 'B' percentile for modeling basis risk outside of recessionary periods in the analysis of cash flows, instead of a 'BB' percentile as proposed in the RFC. This change associates cash flows outside of a recession with an "expected case"" for purposes of basis risk stresses. Modeling of recessionary cash flows still applies a rating-specific percentile as stated in the RFC (see ¶¶228-236).
- The fourth change relates to cash flow modeling using different recession timings and individual prepayment assumptions, which can result in the remaining asset value in a pool showing as less than or equal to the estimated loan defaults. In such a situation, these criteria envisage shifting the start of the hypothetical recession forward and modeling a default of the entire remaining pool balance (see ¶¶219-220). By contrast, the RFC only proposed moving the start of the hypothetical recession to the preceding recession start date.
- Finally, these criteria do not use the "forward" interest rate path in a separate run for modeling interest rate stresses on cash flows as proposed in the RFC when the forward curve on the date of the analysis lies within the "up" and "down" interest rate curves (see ¶226). The reason for this is that other runs sufficiently cover that scenario.

30. Furthermore, these criteria include aspects of the previous U.K. RMBS criteria that the RFC proposal summarized and compared but did not amend:

- Adjustment factors for county court judgments, previous bankruptcies and individual voluntary arrangements (see ¶¶84-90),
- Adjustment factors for short-term interest-only mortgage loans (¶¶110-112),
- Adjustment factors for buy-to-let loans (¶¶125-130),
- Adjustment factors for second-lien mortgages (¶134), and
- Modeling assumptions for foreclosure costs (¶202), foreclosure periods (¶¶221-223), and commingling risks (¶¶249-251).

IV. IMPACT ON OUTSTANDING RATINGS

31. These criteria should not have an impact on existing ratings on prime U.K. RMBS, although marginal rating actions could affect those prime RMBS whose credit performance in the recent downturn has been somewhat muted and some prime RMBS backed by asset pools that have not been recently managed. Prime RMBS include stand-alone and master trust structures backed by prime collateral. These criteria should not affect the ratings on U.K. covered bonds.

32. The impact of these criteria on issue ratings in the nonprime sector of the U.K. RMBS market would be more pronounced, all else being equal. Although ratings on most senior securities in nonprime U.K. RMBS should experience few changes, ratings on more than half of mezzanine securities and two-thirds of junior ones could be lowered. The magnitude of any rating changes will depend on individual pool and structural features and greater variance will occur in specific transactions. However, the changes should generally be in the range of one rating category. Some of these transactions have high seasoning, strong performance, and lower original loan to values than that of the archetypical pool. These criteria should not impact the senior securities in those transactions and may positively affect some mezzanine and junior securities, all else being equal.

33. Any rating changes will reflect a pool's prevailing performance and the anticipated future performance of the

underlying portfolio.

V. EFFECTIVE DATE AND TRANSITION

34. These criteria are effective immediately. We intend to complete our review of all existing U.K. RMBS ratings over the next six months.

VI. METHODOLOGY AND ASSUMPTIONS

35. This criteria update enhances the comparability of Standard & Poor's issue ratings on U.K. RMBS with ratings in other sectors, other areas of structured finance, and RMBS ratings globally, and increases the transparency of the rating analysis.

36. The alignment of the U.K. RMBS criteria with the global RMBS analytical framework and criteria aims to achieve this ratings comparability.

37. To analyze a particular characteristic of U.K. RMBS, the criteria use the same approach as that in the U.S. RMBS criteria if the characteristic and available information are not markedly different from those in the U.S. This reflects the earlier recalibration of U.S. RMBS criteria (see "Methodology And Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans," published Sept. 10, 2009). The U.S. RMBS market is widely regarded as the biggest market globally, providing expansive performance data and representative comparison points. The stresses on U.S. mortgage loan pools have unveiled certain credit risks of pool characteristics that are similar to those in the U.K., but U.K. pools have not experienced corresponding economic stress. Trends in the U.S. market can therefore provide pertinent information for the global RMBS analysis, so the U.S. RMBS criteria constitute a starting point.

38. For certain characteristics of the U.K. market, the criteria align with the approach for Australian RMBS if these characteristics compare more closely with Australian RMBS than with U.S. RMBS (see "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011).

39. The criteria develop a specific analytical approach if a unique feature of U.K. RMBS does not allow a direct comparison with the global criteria.

VII. METHODOLOGY: CREDIT QUALITY OF THE SECURITIZED ASSETS

40. The first key step in analyzing the credit quality of the securitized assets underlying a U.K. RMBS issue is to calculate the amount of credit enhancement commensurate with a certain issue rating.

41. The credit enhancement amount is equivalent to an estimate of potential losses in a mortgage loan pool under conditions of corresponding stress.

42. The significant recalibration of the U.K. RMBS criteria results in increased credit enhancement at all rating levels.

43. The credit enhancement level consists of two components: (i) foreclosure frequency and (ii) loss severity (see

¶¶177-183).

44. Foreclosure frequency represents the proportion of loans in a pool that would likely go into foreclosure.

45. Loss severity refers to the loss on foreclosure (i.e. the amount by which a loan balance and foreclosure costs exceeds the property sale proceeds).

46. Foreclosure frequency and loss severity estimates for a mortgage loan pool backing a U.K. RMBS transaction result from comparing the characteristics of that pool with the attributes of an archetypical U.K. pool and making adjustments depending on the variances.

47. The criteria define the attributes of the archetypical U.K. mortgage loan pool and set corresponding benchmarks of credit enhancement (see table 6 and table 4). The credit enhancement levels for the archetypical U.K. pool show a close alignment with the credit enhancement levels under the criteria for Australian and U.S. RMBS.

48. Credit enhancement at the 'AA+' to 'B+' rating levels derive from an interpolation of the credit enhancement values at the 'AAA' and 'B' levels (see ¶¶73-74).

Table 4

Benchmark Credit Enhancement For The Archetypical U.K. Pool

(Compared With That In Other Jurisdictions)

	--Credit enhancement (%)--	
	AAA	**B**
U.K.	6.0	0.4*
Australia	5.0	0.4*
U.S.	7.5	0.5*
	--Foreclosure frequency (%)§--	
	AAA	**B**
U.K.	12.0	1.5*
Australia	10.0	1.1*
U.S.	15.0	1.7*
	--Loss severity (%)§--	
	AAA	**B**
U.K.	50.0	28.0
Australia	50.0	31.0
U.S.	50.0	30.0

*Given a stable or positive outlook (i.e. benign starting conditions). See "How Changes In The U.K. Mortgage Market Outlook Could Affect The Rating Analysis," in ¶¶70-75. §The foreclosure frequency and loss severity--including foreclosure costs--are the components of loss levels (representing the rounded credit enhancement), for modeling purposes, of an archetypical pool in a property market at equilibrium, taking into account foregone loan interest.

49. If the attributes of an actual U.K. pool indicate better credit quality than the archetype, the credit enhancement is subject to a floor of 4% for a 'AAA' rating and a floor of 0.35% for a 'B' rating. These minimum credit enhancement levels are the same as those in the global criteria. Higher leverage in a structure than represented by a credit enhancement level of 4% signals vulnerabilities that are inconsistent with the creditworthiness associated with 'AAA'

ratings (see ¶20 in "Methodology And Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans," published Sept. 10, 2009).

50. The criteria adjust the credit enhancement of an actual mortgage loan pool if the pool's characteristics deviate from the attributes of the archetypical pool. Table 5 presents the credit enhancement levels (including foregone interest and originator-specific pool adjustments) at closing--under these criteria--for sample transactions representative of the U.K. RMBS market.

Table 5

Credit Enhancement Levels At Closing For Representative Historical Portfolios Under The Updated U.K. RMBS Criteria

	--Credit enhancement (%)--				
Rating category	**2008 prime transaction**	**2007 nonprime transaction**	**2006 nonprime transaction**	**2005 prime transaction**	**2005 nonprime transaction**
AAA	12.5	41.0	26.5	4.0	25.0
AA	7.5	26.0	17.0	3.5	17.0
A	4.5	16.5	11.0	2.5	10.5
BBB	2.5	10.0	6.5	2.0	7.0

A. The Archetypical U.K. Mortgage Loan Pool

51. The archetypical U.K. mortgage loan pool contains at least 250 loans and shows specific characteristics related to the borrowers, loans, security arrangements, and properties (see table 6).

52. Variations from the archetype result in credit enhancement adjustments (see ¶¶82-174).

Table 6

Specification Of The Archetypical U.K. Mortgage Loan Pool

Archetypical characteristics	**Criteria paragraph(s)**
1. Borrower and mortgage loan	
Loan to value of 73% at origination	91-93
Borrower is not a first-time buyer	108-109
Borrower was never subject to a county court judgment and has no adverse credit history, such as a previous bankruptcy or individual voluntary arrangement	84-90
The ratio of the loan balance to borrower's pretax annual income (income multiple) is a maximum 3.5x	94-103
Floating-rate loan with no initial fixed or discount period (i.e. not subject to a payment shock due to a sudden rise in monthly payments)	132-133
Income-verified loan (lender has verified the borrower's income)	113-121
Loan is not in arrears	149-161
Loan seasoning (elapsed term) of up to 60 months	104-107
Loan is on full repayment terms or is a long-term interest-only loan (i.e. nonamortizing and with an initial term of at least 10 years)	110-112
2. Security and property	
First-lien mortgage on the property	134
Loan purpose is purchase of property (or refinancing with full re-underwriting)	122-124

Table 6

Specification Of The Archetypical U.K. Mortgage Loan Pool (cont.)	
Owner-occupied property	125-130
Loan documentation includes a full valuation on the secured property from an appraiser	171-174
The valuation is not a jumbo valuation (i.e. one that exceeds £312,500 for North U.K. or £500,000 for South U.K.)	168-170
3. Other: Pool characteristics	
No adjustment factor related to the originators (lenders)	162-167
The pool is geographically diversified across the U.K.	147-148
The pool is granular (that is, contains at least 250 loans)	135-139

53. The archetypical U.K. pool has idealized features relative to those observed in historical mortgage loan pools (see table 7). For instance, many actual loans have initial promotional periods before reverting to a standard rate. Also, actual pools may include specific product types, such as loans to borrowers that self-certify their income. In addition, loan to value (LTV) ratios in actual pools show a wider distribution than in the archetypical pool.

Table 7

Average Features Of Historical U.K. Mortgage Loan Pools Compared With The U.K. Archetype's

Pool characteristics	Archetypical pool	2008 prime pool	2007 nonconforming pool	2006 nonconforming pool	2005 prime pool	2005 nonconforming Pool
Original loan-to-value ratio (%)	73	72.0 on average	79.5 on average	76.5 on average	68.5 on average	73.0 on average
Owner-occupied properties (% of pool)	100	100	89	98.5	100	97
First-time buyer (% of pool)	0	19.5	17.5	11	29.5	14.5
Repayment or long-term interest-only (IO) loan (% of pool)	100	98.5	99	98.5	96.5	99
		(of which 36.5% long-term IO)	(of which 64% long-term IO)	(of which 54% long-term IO)	(of which 33% long-term IO)	(of which 50.5% long-term IO)
Loans in arrears (% of pool)	0	0	5.5	8	4.5	14.5
Loan seasoning	Less than or equal to 5 years	28 months	7 months	5 months	73 months	4.5 months
Loan seasoning of up to 5 years (% of pool)	100	88	100	97.5	44	100
Remortgage loans (refinancing mortgage loans; % of pool)	0 (unless fully reunderwritten)	52	43	63	11.5	59
Loans with possible payment shock (% of pool)	0	89.5	91	94	74	98.5
Self-certified loans (% of pool)	0	14	41	64.5	0	69.5
Geographic concentration	None	None	0.8% above limit (North)	None	0.2% above limit (South East including London)	0.8% above limit (North)

Table 7

Average Features Of Historical U.K. Mortgage Loan Pools Compared With The U.K. Archetype's (cont.)						
Number of loans	Minimum 250	75,500	7,250	10,400	77,000	6,850

54. The features of the archetypical U.K. pool closely match those of archetypical pools defined in the U.S. and Australian RMBS criteria. The criteria also assume prudent underwriting of the mortgage loans in the archetypical U.K. pool.

55. The global criteria adjust for differences among the archetypical pools based on regional variations.

56. The lower 'AAA' credit enhancement anchor for the archetypical U.K. pool reflects a stronger credit profile relative to the U.S. archetype. For instance, the LTV ratio of 73% for the archetypical U.K. pool is more conservative than the 75% LTV for the U.S. archetype. Another difference is that the archetypical U.K. pool excludes first-time buyers.

57. On the other hand, the attributes of the archetypical U.K. pool reflect a weaker credit profile than the Australian archetype. This is because the U.K. archetypical pool includes long-term interest-only mortgage loans, and borrowers' payments on such loans do not reduce credit risk as quickly as payments on most Australian mortgage loans.

B. 'AAA' Credit Enhancement Anchor For U.K. RMBS

58. At the core of the methodology in these criteria is the setting of an anchor point that is consistent with the global RMBS criteria and serves as the benchmark credit enhancement for the archetypical U.K. mortgage loan pool at the 'AAA' rating level.

59. This fixed 'AAA' credit enhancement level (or 'AAA' credit enhancement anchor) is a percentage of the original pool amount. It reflects an estimate of the level of foreclosures and severity of losses in an archetypical U.K. pool supporting a 'AAA' rated RMBS under an extreme economic stress scenario.

60. The 'AAA' credit enhancement anchor for the archetypical U.K. pool is 6%. This is lower than the corresponding anchor point of 7.5% for the archetypical U.S. pool and higher than that for the archetypical Australian pool, which is 5%. These differences partly reflect the variances among the attributes of each archetypical pool (see ¶¶55-57). Another salient factor contributing to the different 'AAA' credit enhancement anchors is our assessment of the legal and market environment in each jurisdiction (see ¶61).

61. Various jurisdictional factors support a lower credit enhancement anchor for U.K. RMBS than for U.S. RMBS:

- First, a mortgage lender in the U.K. has full legal recourse to the borrower, which has a bearing on the relative propensity to default,
- Second, there is stronger structural support in the U.K. through unemployment benefits and support for mortgage interest, and
- Third, the overall structure of the U.K. mortgage market provides for a strong framework because of, for instance, mortgage market regulation.

62. Under these criteria, during normal economic cycles, the 'AAA' credit enhancement anchor would likely remain constant. It may change, however, if economic forecasts and our market outlook indicated moderate to substantial stress for the U.K. mortgage market (see ¶¶70-75).

63. To maintain a relatively constant 'AAA' credit enhancement anchor during normal housing cycles, the analysis includes adjustments for the likely impact of volatile house prices on real loss severities (see ¶¶184-201).

C. Rationale For The Credit Enhancement Anchor

64. An extreme historical stress scenario, such as the U.S. Great Depression, serves as a reference point for the 'AAA' credit enhancement of an archetypical pool in developed economies (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009).

65. Our research shows that the metrics of the extreme stress scenario do not need adjustments for structural differences in the U.K. economy (see Appendix IV in "Understanding Standard & Poor's Rating Definitions," published June 3, 2009).

66. Because mortgage lending in the U.K. had not yet fully developed in the 1930s, no comparable data are available. However, published research on the recession in the U.K. during that period provides useful macroeconomic data.

67. The economic downturn in the U.K. during the 1930s appears to have been milder than the U.S. Great Depression. Export trade in the then chief industries collapsed, and unemployment peaked at 22.1% in 1932 following a previous high of 16.9% in 1921 (Hicks and Allen, 1999; Constantine, 1980). The peak unemployment rate in 1932 may have understated the true extent of the jobless situation (Aldcroft, 1986). Nevertheless, it was still lower than the 24.9% observed in the U.S. in 1933 (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009). Nominal GDP only experienced a deterioration of about 10% during that period, according to the U.K. Office for National Statistics. However, the U.K. economy had already experienced a decline after World War I ended, with GDP decreasing sharply between 1918 and 1921 by a cumulative 19.2% (Barro et al., 2008).

68. If one regards the recession in the U.K. in the early 1930s as a prolongation of continuously weak economic conditions since 1918, the overall level of stress during the 1930s was higher than the scenario the criteria associate with a 'AA' or severe stress, but not as extreme as a 'AAA' stress scenario.

69. The 'AAA' stress scenario for analyzing the archetypical U.K. pool incorporates data from our analysis of major economic recessions in the U.S. and the U.K. Notably, the data include an unemployment rate of 25%.

D. How Changes In The U.K. Mortgage Market Outlook Could Affect The Rating Analysis

70. Consistent with the global RMBS criteria, the 'B' credit enhancement level for an archetypical U.K. mortgage loan pool matches assumptions of expected losses, and varies according to changes in the outlook for the U.K. mortgage market. The level of 'B' credit enhancement indicated in Table 4 results from an analysis that incorporates a stable or improving market outlook.

71. Although the 'AAA' credit enhancement anchor is fixed, credit enhancement at the 'AA+' to 'B+' rating levels fluctuate relative to the 'B' credit enhancement. The 'AAA' credit enhancement could, however, increase if Standard & Poor's

forecasts and economic outlook for the U.K. indicated moderate to substantial market stress.

72. A change in the U.K. mortgage market outlook could, all else being equal, affect a variety of rating factors. The reason for this is that the outlook takes several relevant variables into account, such as:

- Changes in underwriting criteria,
- Structural changes in the mortgage market,
- Forecast unemployment rates,
- Inflation and interest rates,
- Prevailing mortgage loan performance, defaults, delinquencies, and their roll rates (i.e. transition rates),
- Expected house price movements,
- Observed changes in discounts on forced sales, and
- Timing to foreclosure.

73. The revised market outlook contributes to the 'B' credit enhancement and forms part of the analysis for assigning new U.K. RMBS ratings and the surveillance of existing ratings.

74. The credit enhancement for RMBS at the 'AAA' rating level represents a fixed credit enhancement anchor. Credit enhancement values at the 'AA+' to 'B+' rating levels derive from an interpolation from the two benchmarks of 'AAA' and 'B'.

75. Exceptional economic or housing cycles, including variations in house prices beyond the magnitude observed during normal cycles, could lead to adjustments to the credit enhancement at all rating levels, including 'AAA'. For modeling purposes, however, the effect of house price fluctuations during normal cycles forms part of the analysis. In particular, the calculation of the components of the credit enhancement level--specifically, loss severity--includes corresponding adjustments to market-value declines (see ¶¶184-201).

E. Surveillance

76. The characteristics of a mortgage loan pool evolve over time. For instance, some loans in a pool will default or prepay, and other characteristics of the pool will change. As a result, features initially consistent with the archetypical pool may deviate from those of the archetype over a pool's life.

77. Ongoing monitoring of the revised characteristics of individual mortgage loans allows the assessment of risks in less homogenous pools.

78. Rating changes resulting from surveillance primarily emanate from changes in the performance of a pool and the analysis of pool performance data and trends.

79. For a given U.K. RMBS portfolio with changed pool characteristics, the surveillance analysis uses the same methodology and assumptions described in this document.

VIII. ASSUMPTIONS: ADJUSTMENTS AND MODELING

80. The criteria provide a set of adjustment factors leading to different credit enhancement levels when features of a mortgage loan pool vary from those of the archetypical pool (see ¶¶82-203).

81. The criteria also provide a set of modeling assumptions (see ¶¶204-277).

A. Adjustment Factors For Variations From The Archetypical Pool

82. The criteria provide adjustment factors relating to a borrower's credit profile, features of mortgage loans and property values, and pool-level characteristics. The examination of loan performance data and behavioral trends across the U.K. and the global mortgage markets has led to revisions of some of these factors. The updated criteria seek to align the adjustment factors in the U.K. RMBS criteria with those linked to equivalent assumptions in the global criteria. For the reasons stated in paragraph 37, the U.K. RMBS criteria use the U.S. RMBS criteria as a starting point to establish adjustment factors for characteristics that vary from those of the archetypical pool and provide a consistent approach where relevant.

83. The criteria apply most adjustment factors as multiples of the credit enhancement.

A.1. Adjustment factors for a borrower's credit features and leverage

a) A borrower's negative credit history: County court judgments, previous discharged bankruptcies, and individual voluntary arrangements

84. One of the attributes of the archetypical U.K. pool is that borrowers do not have a negative credit history, such as county court judgments (CCJs).

85. The criteria set adjustment factors that increase the credit enhancement for borrowers with CCJs, depending on when the CCJ was registered (see table 8). A borrower's previous credit history is an indicator of future debt repayment trends. A borrower with CCJs may have an increased likelihood of default in the future. Also, a recent CCJ indicates greater risk than an older CCJ.

Table 8

Adjustment Factors For County Court Judgments

	--Adjustment factors by age of CCJ--	
Number of county court judgments (CCJs)	**CCJ is less than a year old***	**CCJ is at least a year old***
1	1.1x	1.075x
2	1.5x	1.375x
3	2.5x	2.125x
4	3.8x	3.100x
More than 4	4.0x	3.250x

*Based on the time elapsed since the date of registration of the most recent CCJ if more than one exists.

86. The criteria apply adjustments for both satisfied and unsatisfied CCJs, since a CCJ is evidence of a borrower's previous

default, whereas satisfaction of the debt is a proxy for recovery.

87. If the data on satisfied CCJs are unavailable, the criteria reflect this through an additional adjustment at pool level (see ¶¶162-167).

88. The criteria also supplement the analysis of a mortgage loan pool if the number of borrowers subject to CCJs is unusually large. This involves analyzing originator-specific data showing the relative performance of the corresponding mortgage loans and separately reflecting this through the pool-specific adjustment (see ¶¶162-167).

89. Adjustment factors for CCJs are comparable with: (i) the adjustments in the criteria for Australian RMBS relating to previous credit events and (ii) the corresponding adjustments for U.S. Fair Isaac Corp. (FICO) credit scores (see ¶148, first bullet point, ¶161, and table 28 in "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011).

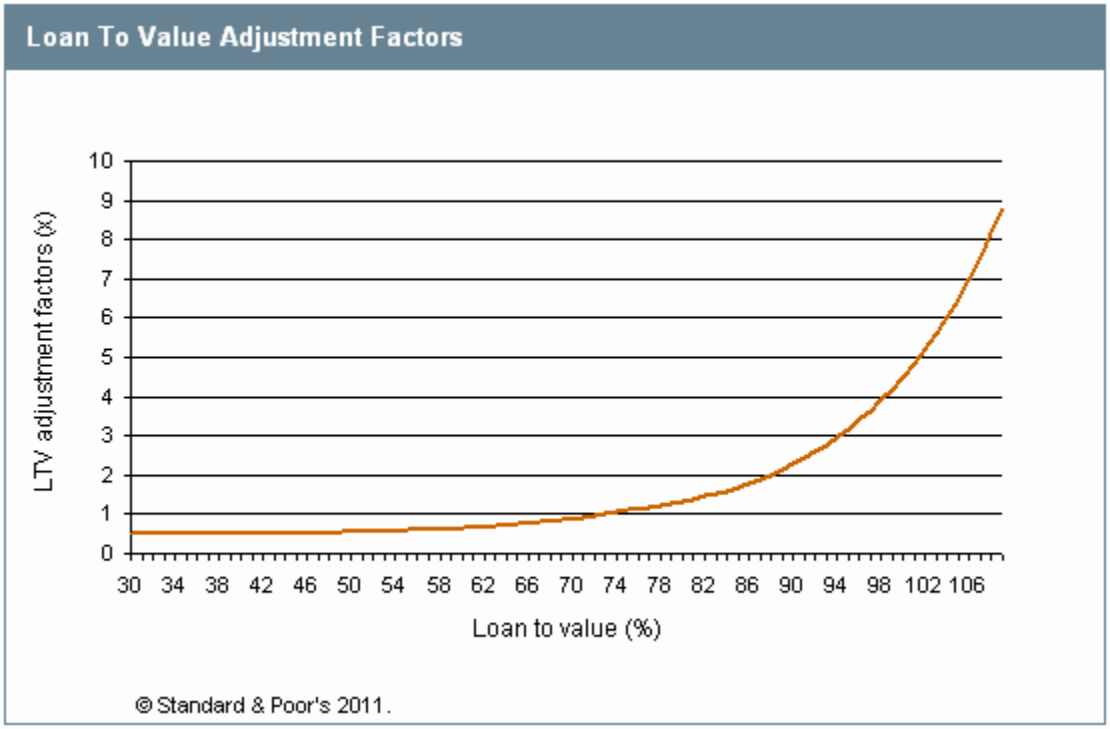
90. For discharged bankrupt borrowers and borrowers that used an individual voluntary arrangement, the criteria establish a default frequency equal to the greater of 50% and the foreclosure frequency that results from all other applicable loan characteristics, except loan seasoning and arrears status (see ¶¶104-107 and ¶¶149-161). The adjustments for loan seasoning and arrears, where applicable, are made to the resulting default frequency. See paragraphs 179-180 for details of how--for modeling purposes--the criteria estimate foreclosure frequency based on the credit enhancement of an otherwise archetypical loan.

b) Loan to value

91. The adjustment factors for varying LTV ratios result from a function (based on a multiple of 0.5x for an LTV of 40% or lower) that increases the adjustment factors for higher LTV ratios (see chart 2). The shape of the LTV adjustment-factor curve is identical to the equivalent LTV curve in the global criteria (see ¶¶59-60 and chart 2 in "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011), while reflecting the characteristics for the LTV ratio of the archetypical U.K. pool.

92. The neutral adjustment of 1.0x represents the archetypical LTV level of 73%.

Chart 2



93. The criteria use the original LTV ratio in applying the LTV adjustment factor. If a loan allows redraws or further advances, the criteria calculate the LTV ratio from the maximum drawable balance. The criteria do not apply valuation haircuts for calculating a loan's LTV to determine the foreclosure frequency (see table 16 below). This is because the criteria estimate default propensity relative to a borrower's initial investment or equity.

c) Income multiple

94. The criteria apply adjustment factors for the income multiple of a borrower (calculated as the outstanding loan balance divided by a borrower's annual pretax income; see table 9). As shown in Table 6, a loan that reflects an income multiple of up to 3.5x meets the specification for the archetypical U.K. pool, based on historical data from the U.K. Council of Mortgage Lenders.

95. For an income multiple of between 3.5x and 5x, the criteria apply an adjustment of 1.2x to the credit enhancement.

96. The income multiple adjustment factor of 1.2x no longer applies after 18 months if the loan is not in arrears.

97. If the outstanding loan balance is greater than 5x a borrower's income, the criteria apply an adjustment factor of 1.5x. Unlike the 1.2x adjustment factor above, this 1.5x adjustment, if applicable, continues to apply after 18 months have elapsed. This is because the borrower's repayment ability is likely to remain compromised for a longer time than that of a borrower with a lower income multiple.

Table 9

Adjustment Factors For Income Multiples
1.5x if income multiple is >5x

Table 9

Adjustment Factors For Income Multiples (cont.)
1.2x if income multiple is >3.5x and <=5x*
1.0x if income multiple is <= 3.5x

*No adjustment for loans older than 18 months, if not in arrears.

98. In the event of coborrowers, the corresponding adjustment to the combined income level is: (i) a factor of 1.5x if the income multiple exceeds 3.25x, or (ii) a factor of 1.2x, if the income multiple is in the range of 2.75x to 3.25x. The adjustment factor of 1.2x no longer applies after 18 months, but only if the loan is not in arrears.

99. If the factor for combined income results in a greater adjustment than would have been the case using only one of the two incomes, then the lower adjustment is used for that loan (as calculated in ¶¶95-97).

100. Income-multiple adjustment factors apply only to "income-verified" loans, that is, loans for which the lender has verified the borrower's income.

101. This is because a "self-certified" mortgage loan, for which the borrower declares the annual income, does not allow the same level of affordability assessment. Self-certified loans therefore attract a specific adjustment (see ¶¶113-121).

102. In addition, the income multiple adjustment applies to owner-occupied properties because the origination of buy-to-let loans involves assessing rental income to determine affordability. However, this adjustment also applies to a buy-to-let loan if rental income did not form the primary basis of the affordability assessment. This can be the case if a lender based its decision to grant a buy-to-let loan solely on a borrower's income from employment (see ¶¶127-128).

103. A comparison of metrics indicating whether a borrower can afford a mortgage loan highlights the differences in underwriting practices across jurisdictions. For instance, mortgage lenders in the U.S. use a debt-to-income (DTI) ratio in a more homogeneous way than their U.K. counterparts. On the other hand, the direct comparison of DTI and income-multiple affordability assessments presupposes an assumption on interest rates. The higher U.K. adjustments reflect the possible effect of rising interest rates in floating-rate mortgage loans.

d) Loan seasoning

104. The criteria define a "seasoned" loan as one that has been outstanding for a significant period and is up to date.

105. The criteria align loan seasoning adjustments with comparable adjustments in other jurisdictions (see table 10).

Table 10

Adjustment Factors For Loan Seasoning*
0.75x for seasoning >5 and <=6 years
0.70x for seasoning >6 and <=7 years
0.65x for seasoning >7 and <=8 years
0.60x for seasoning >8 and <=9 years
0.55x for seasoning >9 and <=10 years
0.50x for seasoning >10 years

*Factors only apply to loans that are not in arrears.

106. Historical data indicate the most likely period for a borrower default to be the first five years after the loan disbursal, with defaults peaking in the third year.

107. Seasoned loans are associated with a lower likelihood of foreclosure, for which the criteria assign a credit factor. The loan seasoning adjustment also reflects the lower predictability of initial loan characteristics over time, relative to actual loan performance.

e) First-time buyer

108. The criteria set an adjustment factor of 1.1x for a first-time-buyer, which no longer applies if more than 18 months of the term has elapsed and the loan is not in arrears.

109. There is no evidence from the U.S. market of a variation in mortgage loan performance attributable to first-time buyers. By comparison, we continue to observe that first-time buyers in the U.K. and Australia are prone to increased foreclosure risk.

A.2. Adjustment factors for mortgage loan characteristics and loan products

a) Loan repayment types: Short-term interest-only loans

110. The criteria apply a multiple of 1.5x to short-term interest-only (IO) mortgage loans. A short-term IO loan refers to a nonamortizing bullet loan with an initial term of less than 10 years that requires only interest payments until the maturity date.

111. The mode of principal and interest repayment can affect a borrower's ability to repay the loan.

112. Short-dated IO loans carry greater risk than loans with other repayment terms. The relatively short term of the loan restricts the borrower's ability to build up capital to repay the loan principal, creating a degree of refinancing risk. See paragraphs 140-146 for further details on the relative credit risks to a U.K. mortgage loan pool from IO loans.

b) Self-certified loan products

113. Borrowers of self-certified loan products in the U.K. do not certify their income in the traditional manner (such as through providing pay slips, employer references, or bank statements), and often include the self-employed.

114. The criteria apply an adjustment factor of 1.5x for a self-certified mortgage loan, which decreases over time (see table 11). This adjustment reflects relative performance and behavioral trends and is consistent with that for mortgage loan pools in other jurisdictions.

115. Employed borrowers may also self-certify their income if a portion of it comes from bonuses, commission, or a second job.

116. There is no standard industry definition of what constitutes a self-certified mortgage loan. Differences among self-certified loan products include:

- Fast-track mortgage loans,
- Loans with minimal credit checks,
- Income self-certified mortgage loans, and
- Income noncertified loans.

117. U.K. self-certified loan products do not have the same risk profile as most corresponding U.S. variations and better compare with selected loan products in Australia.

118. In addition, anecdotal information suggests that self-certified income represents only a small proportion of the income base for the affordability assessment of the majority of U.K. borrowers with self-certified loans; the lender verifies the rest of the borrower's income in a conventional manner.

119. The self-certification adjustment factor only applies if the borrower also occupies the property, given that lenders use different underwriting procedures for buy-to-let loans (see ¶¶125-130).

120. In line with the global RMBS criteria, the 1.5x adjustment factor for self-certified U.K. mortgage loans decreases gradually after 12 months and no longer applies after 72 months, in each case, only if the loan is not in arrears (see table 11).

Table 11

Adjustment Factors For Self-Certified Loans (Based On Loan Seasoning)*

Loan seasoning (months)§	<=12	(12-24]	(24-36]	(36-48]	(48-60]	(60-72]	>72
Percentage of adjustment factor of 1.5x (%)	100	85	80	55	35	15	0

*The percentage of the adjustment factor is applied over time. §The symbol'(' denotes exclusion of the first data point in the range, and the symbol ']' denotes the inclusion of the last data point in the range.

121. The criteria treat fast-track mortgage loans as income-verified if a review of a lender's underwriting processes and historical evidence indicate that the performance of these loans has not differed significantly from that of standard income-verified loans, including through a period of economic stress.

c) Remortgage loans (Refinancing mortgage loans)

122. The criteria align adjustment factors for U.K. remortgage loans with corresponding factors for similar loans in other jurisdictions (see table 12).

Table 12

Adjustment Factors For Remortgage Loans

1.1x multiple for refinancing loans*
1.2x multiple for cash-out loans

*1.0x if the lender undertakes full reunderwriting including a revaluation of the property.

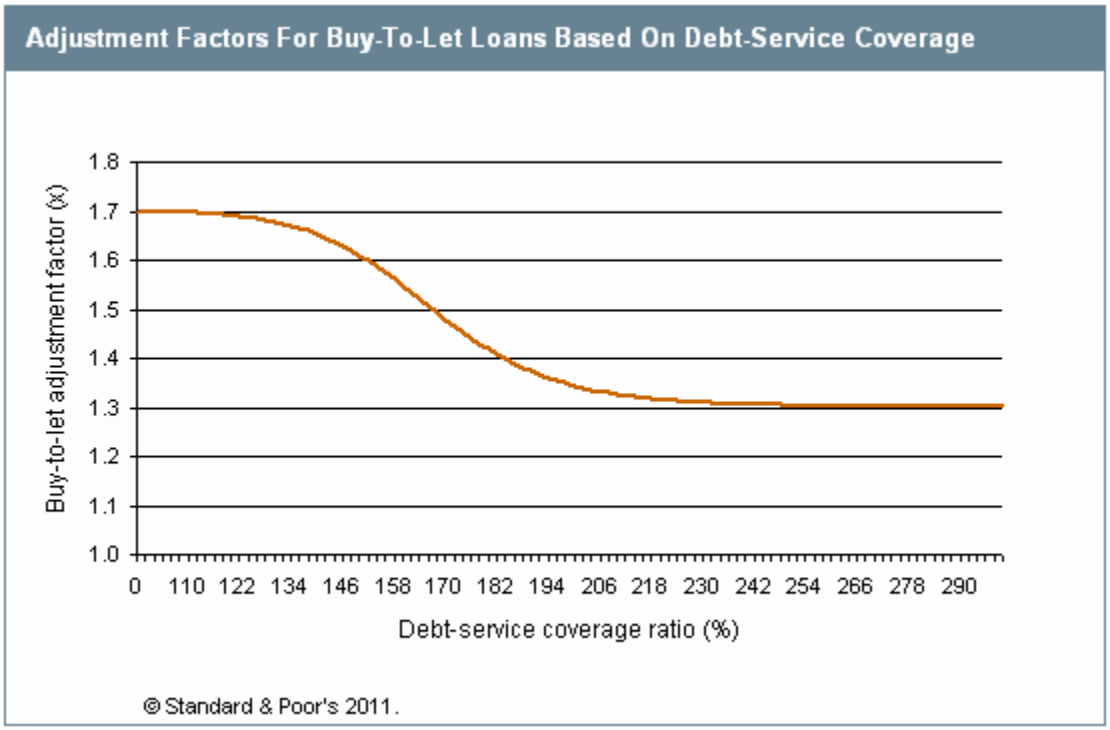
123. If a borrower refinances to take advantage of a lower lending rate, and the lender undertakes full reunderwriting procedures, including reappraising the value of the mortgaged property, there is no adjustment (i.e. a neutral adjustment of 1.0x applies; see table 12).

124. The cash-out adjustment is lower than that in the U.S. RMBS criteria because U.K. lenders often classify a remortgage loan as a "cash out" or withdrawal if the new loan amount marginally exceeds the balance outstanding on the existing mortgage loan. A portion of loans classified as cash-out loans could therefore be more akin to refinancing loans. Similarly, a remortgage loan for home improvement is categorized as a cash-out loan. The adjustment in the U.K. RMBS criteria reflects this composition effect.

d) Buy-to-let loans

125. If available data show the debt-service coverage ratio (DSCR) a lender used in underwriting a buy-to-let loan, the criteria apply an adjustment according to a function that varies with the DSCR levels (see chart 3). The analysis considers the affordability level associated with each loan, based on the current property yield and the reversionary rate of the mortgage loan. By using DSCR data, the criteria allow for a granular assessment of credit risk.

Chart 3



126. If there are no adequate DSCR data, then the alternative buy-to-let adjustment factor is 1.7x, the highest adjustment factor in Chart 3.

127. Since lenders commonly underwrite buy-to-let mortgage loans on the basis of the property yield rather than on the borrower's employment income, the income multiple adjustment does not apply.

128. However, the income multiple adjustment applies to the extent that the lender's affordability calculations use the borrower's employment income.

129. Buy-to-let properties pose different default risks than owner-occupied properties. Such risks include the borrower's reliance on the rental income to meet mortgage loan payments, ability to cover periods when the property is vacant, and experience in managing rental properties.

130. At comparable LTV levels, the basic U.K. adjustment factor of 1.7x for buy-to-let loans is nearly the same as the corresponding U.S. adjustment factor, reflecting similar risk profiles.

e) Loan size: Jumbo loans

131. The criteria capture the risk of larger loans through an adjustment factor for jumbo valuations (see ¶¶168-170). The analysis reviews how underwriters assess loan-size risk, and this forms part of the adjustment related to the lender (see ¶¶162-167).

f) Payment shock

132. The criteria apply an adjustment factor of 1.2x for mortgage loans exposed to a possible payment shock--such as a loan at an initial fixed or discounted interest rate--until six months after the date the interest rate reverts to standard rates. After that date, the adjustment no longer applies, but only if the loan is not in arrears.

133. Where relevant, the 1.2x adjustment factor applies to other types of possible payment shock; for example, in the case of an amortizing loan with an initial interest-only period. Securitized pools in the U.K. do not include mortgage loans that allow subsequent fixed-rate periods and consequently these criteria do not address the risks of such loans.

g) Second-lien mortgage loans

134. The criteria apply an adjustment factor of 1.67x to any second-lien mortgage loans in a pool. The total loan balance for the purposes of making other adjustments, such as for calculating an LTV ratio, is the sum of the first-ranking charge and the second lien.

A.3. Adjustment factors for pool-level characteristics and performance

a) Small-pool adjustment

135. For pools that--unlike the archetype--contain fewer than 250 mortgage loans, the criteria apply the small-pool adjustment as described in paragraphs 42-43 of "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011. As clarified in paragraph 6 of "Methodology For Applying RMBS Small Pool Adjustment Factor," published May 24, 2012, this applies only to transactions that initially comprise fewer than 250 mortgage loans.

136. The small-pool adjustment addresses the risks of less granular pools.

137. Our research shows that when a pool is sufficiently granular, the risks attached to an individual loan are mitigated at the pool level.

138. Nonetheless, the analysis of a pool focuses on any material concentration in a few loans and may result in a pool-level adjustment (see ¶¶162-167).

139. A pool may contain a loan that does not allow for an appropriate estimate of potential losses under these criteria. An example of such a loan is one for which the value of the mortgaged property is unusually large or small. Similarly, the modeling assumptions for the weighted average default frequency and loss severity may not fully capture the correlation between default and recovery of an individual LTV ratio.

b) Concentration of long-term interest-only loans

140. The criteria supplement the analysis of an asset pool with concentrations of long-term interest-only (IO) loans, by applying a factor of 1.5x to the excess concentration. A long-term IO loan refers to a nonamortizing bullet loan that has a minimum initial term of at least 10 years and requires only interest payments until the maturity date.

141. If the aggregate long-term IO loans exceed 50% of the total pool balance, the criteria apply an adjustment factor of

1.5x to the amount exceeding 50%.

142. This factor is the same as for short-dated IO loans (i.e. those with initial terms of less than 10 years).

143. Long-term IO loans form part of the archetypical U.K. pool, unless their aggregate proportion exceeds 50%. This approach differs from the global RMBS criteria.

144. Long-term IO loans in the U.K. are not comparable with U.S. IO loans, which amortize after an initial, limited interest-only period. Furthermore, they are not comparable with Australian bullet loans. They are, however, more comparable with U.S. and Australian long-term balloon loans, such as those with terms exceeding 15 years (see ¶76, table 15, and ¶170 in "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011).

145. Absent any concentration in long-term IO loans, the U.K. criteria apply a factor of 1.0x to the credit enhancement if a mortgage loan pool contains long-term IO loans. This is different from the global criteria's treatment of long-term balloon loans. The difference reflects the predominance of the U.K. IO product, for which there are recent and historical performance data, and the lower refinancing risks of a commoditized loan product.

146. U.K. short-dated IO loans, on the other hand, attract an adjustment factor of 1.5x, which is lower than the corresponding factor in the global criteria for the same reasons noted above.

c) Geographic concentration

147. The criteria address geographic concentration risk at the level of a U.K. region and apply an adjustment for an excessive concentration of mortgage loans in a pool, based on the postcode of the mortgaged property (see table 13). The adjustments for regional concentration shown in Table 13 apply to portfolio concentration in any region of the U.K. that exceeds the limits set out in Table 14.

Table 13

Adjustment Factors For Geographic Concentration

1.05x multiple for concentration in any of the 11 U.K. regions
1.5x multiple for postcode concentration that exceeds 2%*

*Postcode concentration is measured using the first half of a postcode, also known as the "out code" in the U.K.

Table 14

Mortgage Loan Concentration Limits For The U.K. By Region

Region	Concentration limit (%)
East Midlands	14
North	9
North West	23
Northern Ireland	6
Scotland	17
Wales	10
West Midlands	18
Yorks and Humber	17
East Anglia	18
South East (including London)	52

Table 14

Mortgage Loan Concentration Limits For The U.K. By Region (cont.)

South West	17

148. The U.S. RMBS criteria test for geographic concentration risk using a combination of two approaches. One approach uses the Herfindhal-Hirschman index to provide a measure of general pool diversity. Similar to the situation in Australia, the Herfindahl-Hirschman index does not appropriately reflect economic diversity in the U.K. The second approach highlights specific areas of concentration by metropolitan statistical areas, which is comparable with the approach in the U.K. RMBS criteria.

d) Arrears analysis

149. The criteria explicitly incorporate the arrears analysis in the modeling assumptions.

150. The size of any arrears relative to scheduled monthly payments will significantly affect the performance of an individual loan.

151. The adjustment to a pool's foreclosure frequency for loans in arrears (so-called "arrears loans") depends on a combination of the total number of missed payments and the issue rating on the RMBS.

152. An arrears matrix sets out adjustments that apply to loans in various arrears buckets (see table 15). The adjustments differ according to portfolio-specific considerations (see ¶¶157-160).

Table 15

Absolute Increases To Default Frequency For Arrears Analysis (%)

	--Number of missed payments§--				
Rating category	**<1**	**[1-2)**	**[2-3)**	**[3-6)**	**>6**
AAA	0	25	50	100	100
AA	0	25	50	75	100
A	0	20	30	50	100
BBB	0	15	25	50	75
BB	0	15	20	40	75
B	0	10	15	30	75

§The symbol '[' denotes inclusion of the first data point in the range, and the symbol ')' denotes the exclusion of the last data point in the range.

153. The arrears matrix in Table 15 applies to actual loan level arrears in any given pool and provides adjustments for arrears projections at the pool level rather than at the loan level.

154. The criteria increase the modeled default frequency by the absolute percentages shown in Table 15, after any adjustments stemming from other factors, where relevant (see ¶179). This makes the use of the arrears matrix for arrears projection more effective.

155. The arrears adjustment differs from comparable adjustments in the global criteria because of its use to derive arrears projections for U.K. RMBS.

156. The arrears adjustment includes the following aspects:

- An individual borrower's recent and current arrears history,
- Performance-based loss projections (based on transaction and industry performance trends) for the surveillance of existing ratings, and
- The assessment of the originator's historical performance in the mortgage originator adjustment.

For each of these three aspects, see "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011, namely: (i) paragraphs 54, 55, and the first bullet point in paragraph 156 for the borrower's arrears history, (ii) paragraph 9, fourth bullet point, as well as paragraphs 124 and 184-185 for the performance-based loss projections, and (iii) paragraphs 90, 91, and 177 for the assessment of the originator's historical performance.

157. At the inception of an RMBS transaction, if a pool is relatively unseasoned, there is no performance data, or the mortgage loans in the pool have been specially selected, actual arrears patterns may not be apparent.

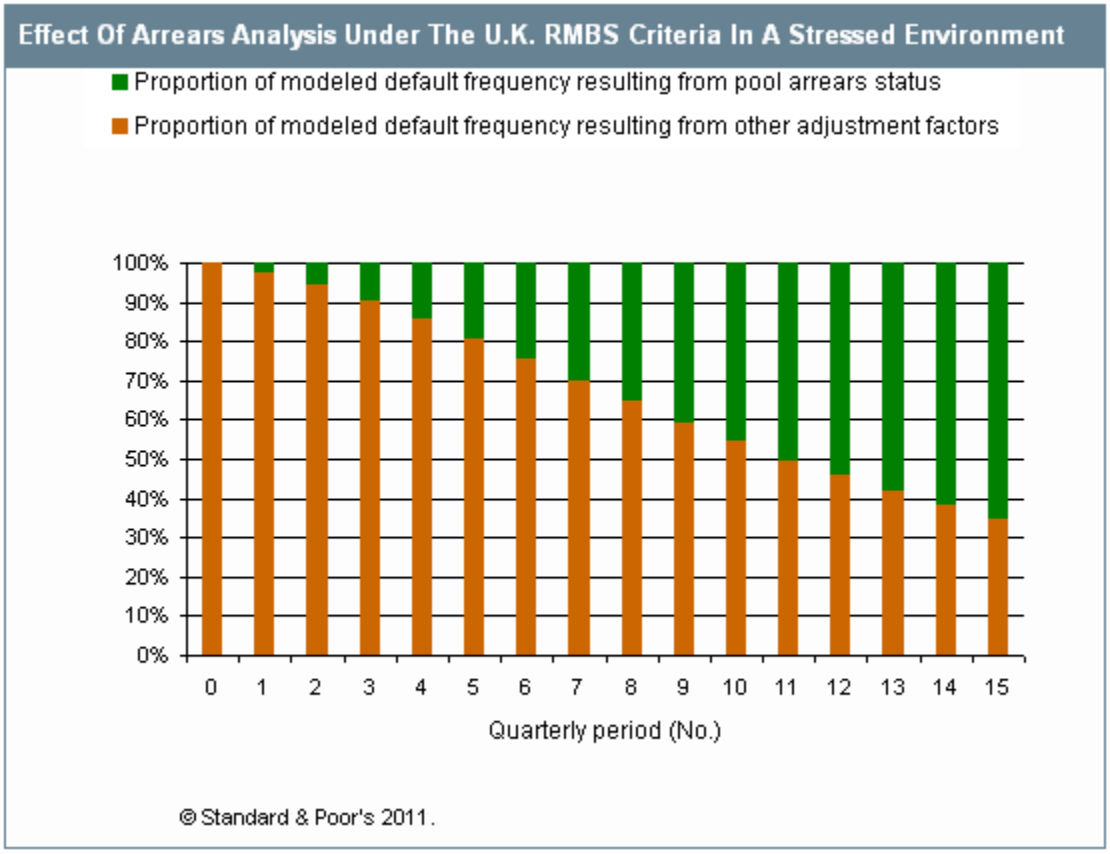
158. In cases where future performance could change the arrears position of an asset pool, the criteria make additional adjustments to the default probability metric by projecting buckets of probable arrears.

159. The determination of these projections involves analyzing historical performance data from previous transactions of the same originator and of comparable portfolios. An arrears projection also involves assessing how collection rates compare with actual and projected arrears levels. Similarly, the projections incorporate technical effects on reported arrears from exogenous factors (see "How Falling Interest Rates Could Inflate Arrears Reported in European RMBS," published April 30, 2009).

160. For some loans with arrears, a lower adjustment factor applies, owing to collection efforts that should reduce the default frequency on those loans. For instance, the adjustment is half of the relevant percentage in Table 15 if the borrower has a payment arrangement, is making the agreed payments (i.e. has a "performing" arrangement), and the loan is less than three months in arrears.

161. Projections of how arrears levels could increase during a hypothetical recession show that, over time, the factors examined in the arrears analysis contribute to a greater proportion of a pool's overall default frequency estimate than the factors leading to other loan-level adjustments (see chart 4).

Chart 4



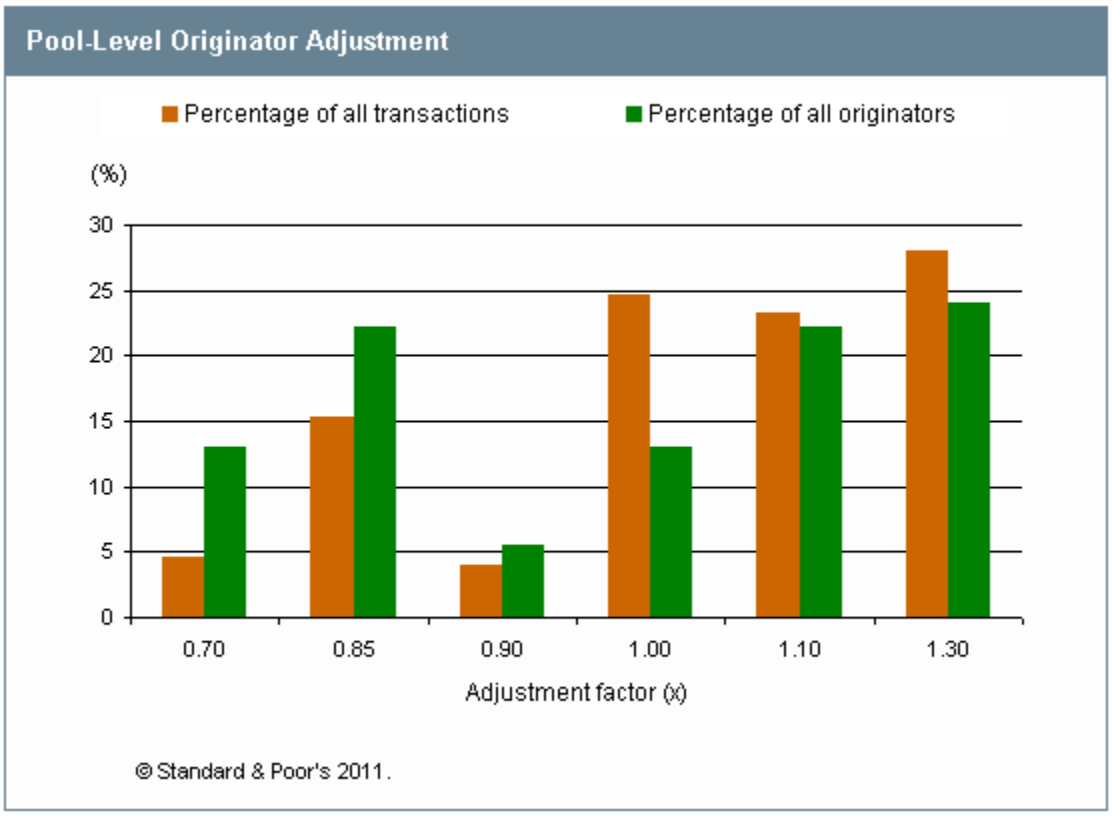
e) Originator adjustment

162. The criteria align with the global framework for assessing originator underwriting and servicer risks and incorporating the outcome of this assessment into the credit analysis. The framework is in "Standard & Poor's Enhanced Mortgage Originator And Underwriting Review Criteria For U.S. RMBS," published Nov. 25, 2008, as amended by "Methodology For Seasoned Loans In U.S. RMBS Transactions," published April 30, 2010, and by "Standard & Poor's Updates Mortgage Originator And Underwriting Review Criteria For U.S. RMBS," published May 5, 2010.

163. The global framework applies a pool-level adjustment factor of between 0.7x and 1.3x to reflect the observed historical performance of various pools from different originators or lenders.

164. The adjustment factors across all U.K. originators show an even distribution around the neutral point, 1.0x. Chart 5 shows a point-in-time distribution of originator adjustments on existing pools, using these criteria.

Chart 5



165. As part of the pool-level originator adjustment, the criteria reflect the specific nature of U.K. RMBS master trust structures by establishing indicators of the willingness and ability of an originator to continue running the trusts.

166. Examples of these considerations include the rating on the sponsoring bank, the number of previous issuances over several years, the proximity of the current seller share to the minimum seller share, the number of master trusts the bank runs, and whether the bank differentiates in the way it manages various master trusts.

167. The higher the perceived importance of a master trust to the originator or servicer, the higher the positive adjustment. This is because the importance of a master trust to the originator or servicer is likely to influence the performance of a transaction.

A.4. Adjustment factors relating to attributes of collateral property

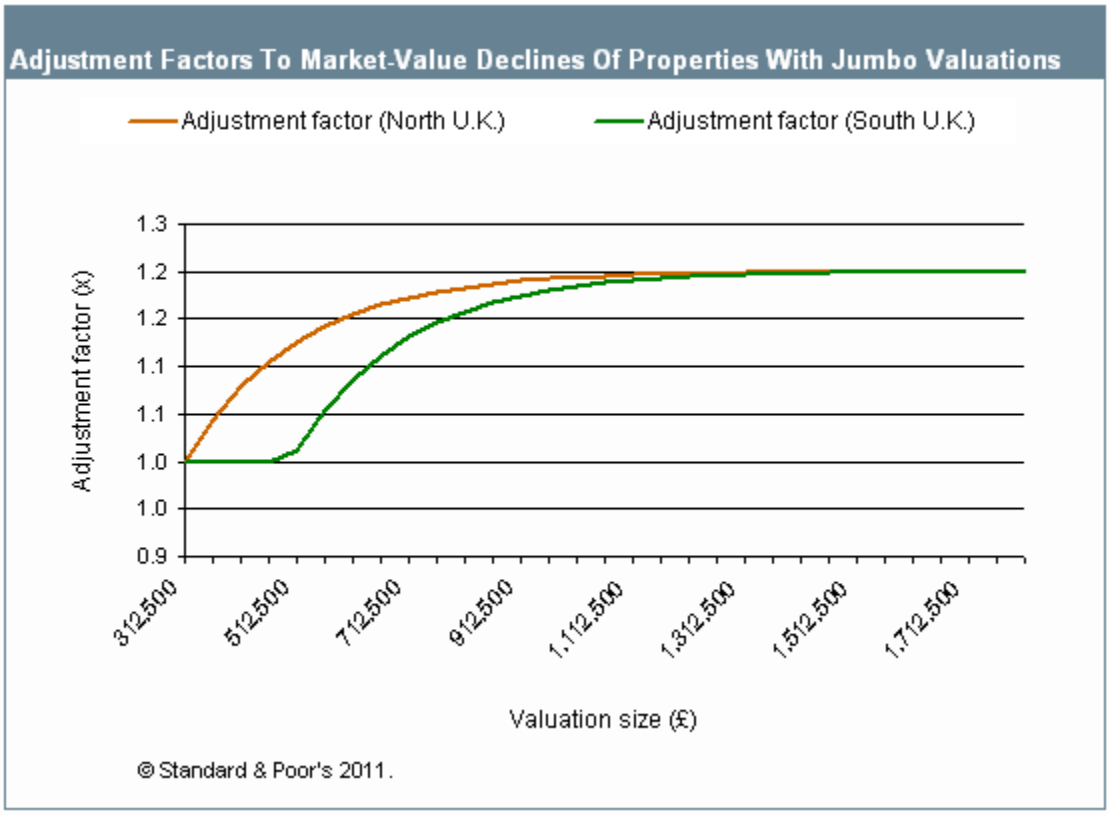
a) Jumbo valuations

168. The criteria apply an adjustment factor for property values that exceed jumbo valuation limits (which are £312,500 in North U.K. and £500,000 in South U.K.), on an increasing scale. The reason for this is that properties with higher valuations could experience higher loss severities, owing to their smaller and less liquid market.

169. The adjustment for jumbo valuations in the modeling results in a higher estimate of the market-value decline on repossessed properties (defined in paragraph 191). The adjustment rises as a function of a jumbo valuation that exceeds the limits described in the preceding paragraph (see chart 6). The maximum adjustment factor is 1.2x.

170. In determining whether a valuation is jumbo, the modeling looks at the fully indexed valuation of the property (see ¶¶197-200).

Chart 6



b) Valuation haircuts

171. The criteria set a reduction or haircut of the original valuation on a property, except if the valuation was a full valuation from a chartered surveyor (see table 16).

Table 16

Property Valuation Haircuts
5.0% haircut to any valuation other than full valuations carried out by a chartered surveyor (e.g., indexed, desktop, drive-by, AVM, or other)

AVM--Automated valuation model.

172. The sale value of a property, relative to its index-implied value, may vary depending on the valuation method used for the original appraisal. The adjustment factor therefore reflects the lack of physical scrutiny in desktop, AVM (automated valuation models), or drive-by valuations, compared with full appraisals. The criteria do not apply haircuts to full valuations from real estate appraisers, irrespective of the loan purpose.

173. The 5% haircut for valuations other than full appraisals serves as a starting point, but increases for some property types, such as certain new flats. An oversupply of newly built flats, particularly in city centers, means that these flats can later become difficult to sell. In addition, incentives from property developers may have overstated the original purchase price.

174. The criteria use three different valuations:

- The original valuation, that is, the appraisal of the property recorded in the loan documentation on the date the loan was granted;
- The haircut original valuation, that is, the original valuation after a haircut as shown in Table 16, depending on the original valuation method; and
- The indexed valuation, that is, the haircut original valuation that is fully indexed as of the date on which the pool data was extracted from the lender's systems (see ¶¶197-200).

These three valuation types feature in each part of the analysis and modeling of RMBS as follows:

- The original valuation is used to calculate the original loan to value (OLTV). Where relevant, the OLTV ratio is based on the lower of the purchase price and the original appraisal (see ¶¶91-93).
- The indexed valuation provides the calculation of repossession market-value declines (see ¶191) and a comparison with jumbo valuation limits (see ¶168).

B. Modeling Assumptions

175. The rating assessment of U.K. RMBS includes an analysis of the payment structure and cash flow mechanics.

176. This analysis uses quantitative models to assess whether the cash flow from the securitized assets would likely suffice, at the applicable rating levels, to make timely payments of interest and ultimate payment of principal on the related securities. This is after taking the available credit enhancement into account and allowing for transaction expenses, such as servicing and trustee fees. Standard & Poor's uses its own credit and cash flow models.

177. This subpart details the modeling assumptions under the criteria. Table 17 below expands on Table 4 by providing the breakdown, for modeling purposes, of the credit enhancement, including its components of foreclosure frequency and loss severity, at each rating level.

Table 17

Components Of Credit Enhancement For The Archetypical U.K. Pool

At Various Rating Levels (For Modeling Purposes)

	--Rating categories--					
	AAA	**AA***	**A***	**BBB***	**BB***	**B***
Credit enhancement (%)	6.0	3.9	2.4	1.4	0.6	0.4
Foreclosure frequency (%)	12.0	8.0	6.0	4.0	2.0	1.5
Loss severity (%)	50.0	48.5	40.0	34.5	30.5	28.0

*Assuming benign starting conditions (i.e. a stable or positive outlook).

178. This subpart also details the calculation--at the pool level--of foreclosure frequency, market-value decline, and loss severity to determine the relevant inputs for modeling the cash flows of an individual U.K. RMBS transaction (see ¶¶179-203). The rest of this subpart details various other cash flow stresses for testing the amount of credit and liquidity support the securitized assets need, the support from subordinated tranches and the cash reserve, and other structural features of a transaction (see ¶¶204-277).

179. Where relevant, adjustments apply to the foreclosure frequencies in Table 17, at each rating level, to account for any loan or pool attribute that increases or decreases risk relative to the archetypical pool. These adjustments comprise any individual adjustment factors and pool-level adjustments shown in paragraphs 82-167 and in paragraph 49.

180. For modeling purposes, the calculation of the weighted average foreclosure frequency (WAFF) of a pool derives from individual loan balances. This calculation involves capping the final adjusted foreclosure frequency of each loan at 100%. Individual recoveries from defaulted mortgage loans in a pool are modeled separately. The WAFF at pool level also has a cap of 100% (see sample loan calculations in Appendix 1).

181. Similarly, the criteria apply adjustments to compute the loss severities of properties whose characteristics vary from the archetype and, consequently, adjust the loss severities shown in Table 17. Paragraphs 168-173 above outline adjustment factors to the loss severities of nonarchetypical properties.

182. In addition, the next section (B.1. "Loss severity computation") details further modeling adjustments to estimate market-value declines of individual properties, depending on the state of the property market at the time of the analysis.

183. The loss severity of a pool then derives from the pool's weighted average loss severity (WALS).

B.1. Loss severity computation

184. The criteria calculate time- and region-specific loss severities and use a modeling method that allows for the reflection of property price fluctuations during normal housing cycles. Exceptional housing cycles result in specific variations under the criteria.

185. The modeling approach seeks to reflect any overvaluation or undervaluation embedded in the property appraisal (or purchase price) used to calculate the probable loss severity related to a loan. This way, loss severity calculations allow for a better estimation of market-value declines through reference to a long-term trend in regional property values, especially at higher rating levels.

186. As a result, the 'AAA' credit enhancement would remain stable during normal economic cycles, while credit enhancement at the other rating levels more closely reflect the prevailing housing cycle.

187. The modeling approach adjusts for inflated or deflated house prices.

188. If a loan is unseasoned, the modeling approach aims to reflect the state of the property market at the time of the analysis.

189. To achieve the same objective in the case of seasoned loans, the approach relates the index-implied value of a property to an estimate of any over- or undervaluation as of the date of the analysis (see ¶¶197-200).

190. The criteria incorporate a forced-sale discount factor into the modeled loss severity for each property and reflect an estimate of any overheating or undervaluation of U.K. residential properties at the regional or national level, relative to a long-term trend in price-to-income ratios (see ¶194).

191. The market-value decline of a repossessed property (Repo MVD) derives from the formula in the bullet points below,

based on the rating-specific input variables shown in Table 18. Absent any over- or undervaluation, the resulting Repo MVD is as shown in the last column of Table 18. The Repo MVD at 'AAA' is 46%, which is close to that in the global RMBS criteria.

Table 18

Property Market Adjustments For Calculating Repossession MVD Modeling Assumptions

Rating category	Fixed MVD (%)	Percentage of overvaluation added (%)	Percentage of undervaluation deducted (%)	Forced-sale discount (%)	Repo MVD, absent over/undervaluation (%)
AAA	40	50	(20)	10	46
AA	36	43	(20)	11	43
A	28	36	(20)	12	37
BBB	23	30	(20)	13	33
BB	19	25	(20)	14	30
B	15	20	(20)	15	28

Repo--Repossession. MVD--Market-value decline.

192. The following definitions pertain to Table 18:

Repo MVD = 1 – [1 – (Fixed MVD +/- percentage of over/undervaluation x over/undervaluation)] x (1 – FSD), where:

- Fixed MVD is the fixed recessionary market-value decline shown in the second column of Table 18, and
- FSD is the forced-sale discount factor detailed in the fifth column of Table 18 (see also "U.K. Nonconforming Lenders Face Rising Losses On Repossessions Sold At Average 15% Discount," published on Sept. 15, 2008). Among other factors, foreclosed properties may sell at a discount due to the stigma that repossession creates. The FSD is larger at lower rating levels and smaller at higher rating levels. This is because in a more severe recession, a greater proportion of all property transactions contributing to the overall index will come from distressed sales.

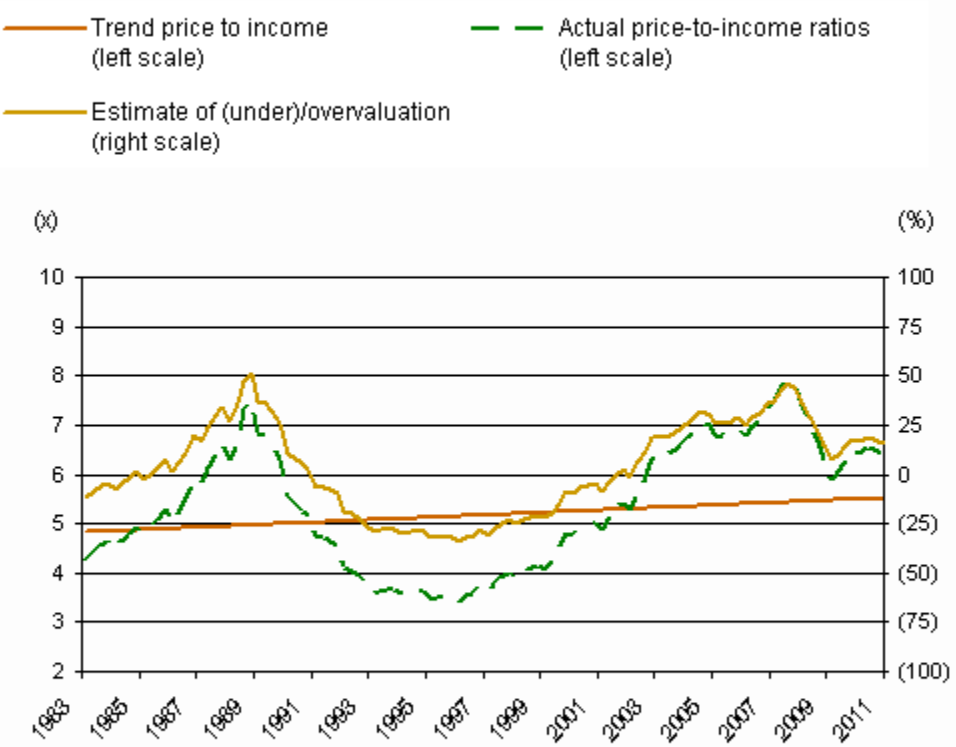
The percentages of over- or undervaluation are in the third and fourth columns of Table 18, respectively. Details of the estimation of the level of over- or undervaluation in a property market are in paragraph 194 and paragraphs 197-200.

193. For example, modeling shows a Repo MVD of 55% at the 'AAA' level for a property in a market estimated to be overvalued by 20%; the calculation is Repo MVD = 1 – [1 – (40% + 50% x 20%)] x (1 – 10%) = 55%. For an estimated undervaluation of 10%, the Repo MVD at 'AAA' is 44%. The corresponding Repo MVDs at the 'BBB' level are 38% and 31%, respectively.

194. The criteria estimate the level of over- or undervaluation of the U.K. property market by comparing the prevailing house-price-to-income ratio against its long-term trend, while incorporating low annual growth into the long-term trend value. The calculation of over- or undervaluation in a given region therefore uses actual values, divided by trend values minus one. We believe using price-to-income ratios for this calculation provides a more accurate and unbiased measurement of over- or undervaluation. Chart 7 illustrates--through region-specific historical data--estimates of over- or undervaluation using this method.

Chart 7

PTI Ratios And Over/Undervaluation Estimates Under The U.K. RMBS Criteria
(Examples For South East Including London)



PTI--Price to income.

© Standard & Poor's 2011.

195. The Repo MVD in each U.K. region has a cap of 75%, and the loss severity of a pool has a floor of 2%.

196. Because the percentages in the fourth column of Table 18 are not linked to a specific rating level, they limit the reduction of the Repo MVD in an undervalued property market. Instead, the criteria use a constant percentage of any undervaluation. On the other hand, the adjustment level for any overvaluation is specific to a particular rating, and it is highest for a 'AAA' rating (see the third column in table 18). This is because a 'AAA' issue rating on RMBS typically reflects greater stability than other ratings, relative to a long-term trend in property values.

197. In estimating the level of recovery and loss severity for an individual portfolio, whose loan originations, and therefore the initial property valuations, all occurred on different dates, the criteria first determine the individual index-implied property values as of the date of the analysis.

198. This determination uses the fully-indexed value of each property.

199. The next step is to assess the level of over- or undervaluation in the prevailing property market at the regional level.

200. The criteria use the U.K. government's Annual Survey of Hours and Earnings, conducted each April, to determine average income levels. Regional house prices come from the region-specific index data that the Nationwide Building Society and Lloyds Banking Group publish for each of the regions within the U.K., namely:

- East Anglia,
- East Midlands,
- North,
- North West,
- Northern Ireland,
- Scotland,
- South East including London,
- South West,
- Wales,
- West Midlands, and
- Yorks and Humber.

201. Appendix 2 provides details of the Repo MVDs that would have applied in each region and at each rating level if this approach had been in place at various points in time. The data show that, as of the end of September 2011, the estimation method depicts properties in eight of the 11 regions in the U.K. as overvalued.

202. Mortgage loan foreclosure costs are modeled at 4% of a loan balance for first-lien mortgage loans, and at 6% for second-lien mortgage loans. These costs are included in the loss severity estimates (see table 17).

203. For modeling purposes, if a portfolio uses a mortgage loan insurance guarantee, the global criteria for Mortgage Insurance Guarantee (MIG) apply.

B.2. Other cash flow assumptions

204. Most U.K. RMBS transactions involve the issuance of securities, split into tranches of differing seniority and supported by a first-loss reserve fund.

205. During modeling, cash flow stresses test the credit and liquidity support the securitized assets need, the support of the subordinated tranches and cash reserve, and any external sources such as a liquidity facility or hedge.

206. For revolving stand-alone RMBS structures (i.e. structures backed by a pool whose assets change or revolve), the modeling approach aims to reflect the structure after the activation of any "stop-substitution" triggers and applies cash flow stresses from this point. A stop-substitution trigger is an event or situation that halts the substitution of assets in a revolving mortgage loan pool.

207. In contrast, the criteria model revolving periods of U.K. RMBS master trusts for reasons specific to their structure (see "Specific cash flow assumptions for master trust structures," in ¶¶264-277).

208. The rating analysis on each tranche of an RMBS issue involves examining the results of the cash flow model, which should show a match with the timely payment of interest and the ultimate payment of the principal amount (i.e. on the legal maturity date).

209. Cash flows and payment commitments should, in general, match for each of the separate cash flow scenarios (or runs) for each tranche.

210. For existing RMBS securities, cash flow modeling may show that a particular tranche misses interest payments or fails to repay the principal on the final legal maturity date under the 'B' stress (i.e. the "expected" case).

211. If this is the case, then the initial assessment, all factors remaining the same, would be to consider lowering the rating on those securities to 'B-'.

212. In addition, depending on our view of the issuer's immediate cash flow position, the rating could move into the 'CCC', 'CC', or 'C' category, consistent with Standard & Poor's rating definitions, as outlined in Appendix III to "Understanding Standard & Poor's Rating Definitions," published June 3, 2009.

213. When the rating analysis does not use cash flow models, the methodology for calculating credit enhancement is different. For instance, to estimate the synthetic credit enhancement to cover default and loss risk, such as under a credit default swap, the methodology uses accrued foregone interest to estimate the loss severity (i.e. "all-in" loss severity).

a) Defaults, recoveries, and delinquencies

214. The cumulative amount of defaults and recoveries for cash flow modeling derives from the pool's WAFF and (1 – WALS) accordingly.

215. For the analysis leading to new issue ratings, the WAFF is a percentage of the initial mortgage loan pool's principal balance.

216. For existing issue ratings, the WAFF is a percentage of the balance of the mortgage loan pool at the point of the surveillance analysis.

217. The criteria model defaults to occur periodically to match the payment profile of the mortgage loans. The default amounts in Table 19 reflect a percentage of the WAFF. The timing of defaults follows two paths, referred to as "front-loaded" (i.e. concentrated toward the earlier stage of a transaction) and "back-loaded" (i.e. concentrated toward the later stage of a transaction), and occur over a three-year recession period.

Table 19

Default Timing For Front-Loaded And Back-Loaded Default Curves

Recession periods (months)	Front-loaded defaults (% of WAFF applied in each month)	Back-loaded default (% of WAFF applied in each month)
1 - 6	5.0	0.8
7 - 12	5.0	0.8
13 - 18	3.3	1.7
19 - 24	1.7	3.3
25 - 30	0.8	5.0
31 - 36	0.8	5.0

WAFF--Weighted average foreclosure frequency.

218. To simulate the impact of varying recession timings, the criteria envisage two different starting points for the recession

period in the first column of Table 19: (i) at inception, and (ii) at the end of the third year.

219. The resulting pool data from modeling prepayment stresses and different future recession starting points could show the WAFF to be greater than the outstanding balance of the pool at the time the hypothetical recession starts in the cash flow analysis. Modeling of prepayment stresses is described in paragraphs 237-245. The WAFF is a percentage of the applicable pool balance (see ¶¶215-216).

220. In this instance, the criteria regard the entire remaining balance as defaulted for this particular cash flow run.

221. Foreclosure periods representing the estimated time to repossess and sell a property upon a default are modeled at: (i) 18 months for owner-occupied properties, (ii) 12 months for buy-to-let loans located in England and Wales and 18 months for buy-to-let loans in the rest of the U.K., and (iii) 21 months for second-lien mortgage loans, including second-lien buy-to-let loans.

222. For owner-occupied properties, an 18-month period represents the typical time necessary for the judicial proceedings in the U.K. and any other likely delay. On the other hand, for buy-to-let mortgage loans the servicer can sell the property without a court order, whether or not a tenant is occupying the property. The recovery period can therefore be shorter.

223. The comparatively longer recovery period for second-lien mortgage loans reflects the possibility that ultimate recoveries result from assets of a borrower other than the mortgaged property.

224. To model the liquidity stress that results from short-term delinquencies, the criteria include a hypothetical delay of a proportion of scheduled interest and principal receipts equal to one-third of the WAFF.

225. Modeling applies this delay in each month of the first 18 months of a hypothetical recession and sets full recovery of the arrears to take place 36 months after the delinquency occurs. The cash flow stress for delinquencies is independent of the arrears adjustment to the WAFF.

b) Interest rates, prepayment rates, and reinvestment rates

1) Interest rate risk

226. Interest rate assumptions apply a wide range of different interest rate curves, and modeling uses five different interest rate paths: (i) up, (ii) down, (iii) up/down, (iv) down/up, and (v) forward. See "Credit Rating Model: CIR (Cox-Ingersoll-Ross) Interest Rate Model," published Nov. 3, 2010. These curves vary by stress scenario. The forward path in (v) is only modeled in the cash flows when the forward curve (e.g., the current forward curve for the London Interbank Offered Rate; LIBOR) is outside the bounds of the "up" and "down" curves in (i) and (ii). The reason for this is that the effect of this individual interest rate path is already captured by the other curves when within their bounds.

227. Specific structural features may involve using additional cash flow stresses such as alternative interest rate patterns or different recession start timings, amongst others.

2) Basis risk

228. Basis risk arises whenever unhedged differences exist between the methodologies for calculating interest on the assets and liabilities of a structure. It differs from interest rate risk in that it may arise between, for example, two floating-rate indices.

229. Basis risk can also exist even when swaps are present, such as when there is a timing mismatch between the reset dates on the securities and on the swap.

230. Different spreads apply over the life of a transaction. The size of the spreads depends on the distribution of historical differences among indices, using the rating-specific values corresponding to the percentiles shown in Table 20.

Table 20

Basis Risk Percentile Stresses

Rating category	Percentile (%)
AAA	95
AA	90
A	65
BBB	50
BB	40
B	30

231. For example, in an RMBS transaction, the underlying mortgage loans may incur interest based on the Bank of England Base Rate (BBR), which is reset monthly, but the securities may pay interest based on the three-month LIBOR. In this case, the analysis looks at the distribution of the historical differences between these two rates, calculated by taking the highest three-month LIBOR over the previous three-month period and the lowest monthly BBR value for each point in the data set. It then takes the percentiles of the resulting distribution shown in Table 20.

232. The criteria do not use a basis-risk stress for fixed-to-floating interest rate exposure, but model such interest rate risk as described in paragraphs 226-227.

233. However, the basis-risk stress applies for exposures between, for instance, a one-month LIBOR and a three-month LIBOR because basis-risk stress simulates a higher stress than interest rate stress. Basis-risk stress also applies if mortgage loans are at a standard variable rate.

234. The criteria apply the stress corresponding to a rating level in the cash flow analysis for the first 18 months of a hypothetical recession. Both before and after this 18-month period, the 'B' percentile from Table 20 applies at all rating levels.

235. For an RMBS transaction whose mortgage loan pool contains loans that pose no basis risk during their promotional period, but will revert to a floating margin that carries basis risk, the level of stress modeled depends on the proportion of the loans in the pool that would eventually have basis-risk exposure.

236. Where there are only positive differences between two indices in a data set, as stated in paragraphs 230-231, the spread is zero.

3) Prepayment scenarios

237. Mortgage loan prepayments vary the amount of excess spread available and may affect the cash flows of an RMBS transaction.

238. The criteria therefore define prepayment stress assumptions (see table 21).

239. The criteria apply the prepayment rates in the second column of Table 21 before the start of the hypothetical recession in the modeling, where relevant (see ¶218). Prepayment then drops immediately to the recessionary prepayment rate at the start of the hypothetical recession (see the third column in table 21).

240. After the recession ends, prepayment rates increase gradually on a straight-line basis to ultimately reach the value shown in the fourth column of Table 21.

Table 21

Prepayment Stress Assumptions

Rating category	Before recession (if applicable)*	During recession (gradually increasing over the 18 months following the end of the recession)	After recession (from month 19 following the end of the recession)
For all rating levels	High: 30% p.a.	3% p.a.	High: 30% p.a.
	Forecast	3% p.a.	High: 30% p.a.
Additional scenario for 'AAA', 'AA+' and 'AA' ratings	Low: 4% p.a.	3% p.a.	Low: 4% p.a.

*See ¶218. p.a.--Per annum.

241. The forecast prepayment rate in Table 21 aims to reflect relatively short-term expectations and the prevailing prepayment rate, to the extent that this rate is stable.

242. The stresses aim to address low prepayment risk before, during, and after recessionary periods, as applicable.

243. The prepayment stress assumptions recognize that, outside of recessionary periods, a more benign economic environment features higher prepayments because more-attractive refinancing opportunities are likely to be available. Modeling of the prepayment stress outside of recessionary periods reflects this (see table 21).

244. At higher rating levels of 'AA' and above, however, reality may play out differently. Modeling therefore uses low prerecession prepayments, irrespective of observed prepayment levels, as well as low postrecession prepayments as an additional scenario.

245. Adjustments to the prepayment assumptions in Table 21 are necessary if a pool's historical prepayment rates were higher than historical averages or if a transaction were particularly sensitive to prepayment risk. An example is an RMBS transaction that relies heavily on excess spread to repay principal on non-asset-backed securities.

4) Reinvestment rates

246. The criteria apply various reinvestment rates at different rating levels for the purposes of cash flow modeling (see table 22).

Table 22

Reinvestment Rate Assumptions*

Rating category	Interest rate used for modeling (floored at 0%)
AAA	LIBOR less the higher of: 2.5% or 5x the contractual margin
AA	LIBOR less the higher of: 2.0% or 4x the contractual margin
A	LIBOR less the higher of: 1.5% or 3x the contractual margin
BBB	LIBOR less the higher of: 1.0% or 2x the contractual margin

Table 22

Reinvestment Rate Assumptions* (cont.)	
BB	LIBOR less the higher of: 1.0% or 2x the contractual margin
B	LIBOR less the higher of: 1.0% or 2x the contractual margin

*The term "contractual margin" refers to the actual margin of for instance, a GIC (Guaranteed Investment Contract) in an initial transaction structure. LIBOR--London Interbank Offered Rate.

247. Reinvestment rate assumptions stress the yield from excess cash that becomes available as a result of, for example, prepayments, as well as the revenues associated with any other cash the issuer holds.

c) Originator insolvency, commingling, and set-off

248. The analysis of any commingling or set-off risks that can result from an originator's or servicer's insolvency follows one of three approaches: (i) application of the counterparty criteria (see "Counterparty And Supporting Obligations Methodology And Assumptions," published Dec. 6, 2010); (ii) modeling to produce estimates of any exposure; or (iii) a combination of (i) and (ii). The combination of the first and second approaches applies if the application of the counterparty criteria shows residual cash flow exposures. The rest of this subsection focuses on the analyses using the approaches in (ii) and (iii).

249. The degree to which a collection account holder's insolvency affects the cash flow from the assets in a mortgage loan pool depends on the collection account's characteristics, if the collection account is not in the name of the issuer of an RMBS.

250. The amount at risk depends on the timing of scheduled payments from borrowers, the frequency of transfers into the transaction account, and the level of prepayments.

251. Under English law, if the issuer benefits from a properly executed declaration of trust regarding the collection account, then insolvency of the account holder should not result in a loss of funds, but only a delay in payment. The results from the analysis in the preceding paragraph often show a delay of one month's cash flow for three months, for a quarterly interest payment.

252. If the loan originator (or servicer) is also a deposit-taking institution, modeling assumes that the originator (or servicer) will default on the initial date of the analysis and that all borrowers with deposit accounts will immediately set off these amounts against their outstanding mortgage loans, regardless of their legal right to do so.

253. An estimate of the set-off exposure derives from looking at historical deposit account balances of mortgagees on the originator's or servicer's books and taking the peak of these balances.

254. The modeling approach also aims to capture set-off risks from any borrowers that are also employees of the originator. This is because amounts owed to them, such as unpaid salaries, pension benefits, and subsidies, could offset payments due on their mortgage loans. As a result, the modeling approach treats the full amount of any employee's mortgage loan balance as entirely set off and all set-off amounts as principal losses.

d) Modeling of fees and expenses paid senior, liquidity facilities, and spread compression

255. The modeling of all the issuer's foreseeable expenses uses stressed costs to reflect the need to replace the initial service provider.

256. The most significant of these is the cost of servicing mortgage loan receivables that is frequently set at a contractually low rate. However, to reflect the likely cost of replacing the servicer, modeling sets servicing fees at the higher of twice the contractual rate and 35 basis points (bps), for prime mortgage loans; and the higher of twice the contractual rate and 50bps for nonprime loans.

257. The loss severity calculation includes mortgage loan foreclosure costs as an input for cash flow modeling (see ¶202). These costs include an estimate of all costs and fees resulting from the pursuit of arrears, litigation, administration, maintenance, and sale of a property. The loss severity used in the cash flow modeling is based on the loan principal and assumes no recovery of any interest accrued on the mortgage loans during the foreclosure period.

258. Cash flow modeling of the securitized mortgage loans takes into account the negative carry resulting from accrued interest on an RMBS during the foreclosure period by using interest rate stresses.

259. Modeling produces estimates of marginal costs from liquidity facilities. Most liquidity facilities are renewable after 364 days and subject to a commitment fee and a drawn fee.

260. Modeling shows the facility as fully drawn 60 days after the start of the analysis (this is the same as the remedy period for a direct support obligation under "Counterparty And Supporting Obligations Methodology And Assumptions," published Dec. 6, 2010).

261. The drawn fee is modeled as being payable from this point on the whole facility balance, unless the documents state that the issuer does not have to pay a fee if the drawings on the facility did not originate from the issuer. Such a situation could arise because of nonrenewal of the facility or a downgrade of the facility provider.

262. Modeling also provides estimates of the possibility that the spread on the loan pool compresses over time. In asset pools that contain mortgage loans with a range of different margins, it is unlikely that the pool will ever yield the sum of the margins of all the final reversionary rates on those loans. This will be due to defaults, prepayments, and product switches. For this reason, modeling includes reduced margins.

263. In addition, an RMBS transaction may feature contractual minimum yield levels, for example, to allow substitutions to continue in revolving pools. In such a case, the modeling approach aims to capture any breach of the yield levels that triggers the end of the revolving period and produces lower yields.

e) Cash flow assumptions specific to master trust structures

264. Because of the specific nature of master trust structures, the criteria apply additional stresses in the cash flow analysis to reflect further testing of credit, liquidity, and recessionary timing.

1) Credit testing

265. In a stand-alone transaction, modeling of the effect of the insolvency of the originator and servicer of the portfolio uses the start date of the analysis because this scenario exerts the most stress.

266. However, in a master trust structure, the payment mechanics are significantly different, depending on whether the originator is still solvent. This is because the originator's insolvency would cause a non-asset trigger event and modeling incorporates more or less stress, depending on individual transaction circumstances.

267. Consequently, further modeling of the cash flows includes more combinations of possible scenarios in a master trust structure.

268. At the point that the originator becomes insolvent, the substitution and sale of new mortgage loans in the trust cease.

269. The master trust then enters into an early amortization period and all of the securities become amortizing or "pass-through" securities, with 'AAA' securities often repaid by order of their maturity dates.

270. If the originator remains solvent, then substitutions would continue to occur and the mortgage loan pool keeps revolving.

271. Modeling of all standard cash flow scenarios uses various prepayment amounts, interest rate patterns, and default patterns. However, modeling of each recession start as described in paragraph 218 runs twice. The first run assumes that the transferor is insolvent and therefore the pool is amortizing as substitutions stop. The second run assumes that the transferor is solvent and therefore the pool continues to revolve, allowing maintenance of the seller share at its contractual minimum, exhibiting the most stress under this scenario. Among other things, these additional runs will result in modeling various spread-compression scenarios.

2) Liquidity testing

272. Some series of RMBS have an earlier legal final maturity date than other series issued from a master trust, for example because they have set bullet-repayment schedules.

273. Nonpayment of these series by their legal final maturity date would constitute a default.

274. To test the timely repayment of such series, modeling uses a lower constant prepayment rate of 0.5% per year at all times. Modeling disregards substitutions, defaults, and recoveries and uses all relevant interest rate patterns.

3) Recessionary-timing testing

275. Because the liabilities of master trusts can have different legal final maturity dates, if junior securities mature earlier than more-senior ones, the senior securities might have insufficient subordination at the point of the junior securities' redemption.

276. To assess this risk, the criteria adjust the hypothetical starting points of recession for the modeling to test whether, on redemption of the junior securities, sufficient credit enhancement is available to absorb losses, and the more-senior securities are still able to pay securities-holders in a timely manner.

277. The timing of each hypothetical recession period therefore varies at yearly intervals, depending on the capital structure of the master trust. For example, the recession could start immediately, as well as at the end of years one, two, three, four, five, six, seven, or eight. During each hypothetical recession, modeling applies the standard combination of prepayments, interest rate patterns, and default patterns. This specific modeling complements the generic recession timings discussed in paragraph 218, but only for master trusts.

IX. APPENDIXES

Appendix 1: Example Calculations (Foreclosure Frequency And Loss Severity)

278. The three hypothetical examples in Table 23 below show the calculation of foreclosure frequencies and loss severities at the 'AAA' rating level, according to these criteria, based on data as of Nov. 30, 2011.

Table 23

Foreclosure Frequency And Loss Severity Calculation Examples For Three Sample Loans

Loan Characteristics	Example 1	Example 2	Example 3
Loan number	**1**	**2**	**3**
Original loan balance	£34,155	£54,750	£148,500
Current loan balance	£32,000	£54,750	£148,500
Prior ranking balance	£0	£0	£0
Valuation	£75,000	£75,000	£165,000
Valuation date	12-Apr-06	12-May-06	26-Jun-06
Valuation type	Desktop	Full surveyor appraisal	Full surveyor appraisal
Loan purpose	Purchase	Purchase	Cash-out
Completion date	12-Apr-06	12-May-06	26-Jun-06
Loan term (years)	25	19	25
Repayment method	Repayment	Interest only	Interest only
Loan product	Floating rate for life of loan	Discount rate	Floating rate for life of loan
Reversionary date	N/A	Dec. 11, 2011	N/A
First income (annual)	£9,237	£9,360	£50,500
Second income (annual)	£0	£5,000	£5,200
Income self-certified	No	Yes	Yes
Monthly payment	£302.34	£436.59	£1,138.50
Occupancy status	Owner-occupied	Owner-occupied	Owner-occupied
First-time buyer	Yes	Yes	No
Region	Scotland	North West	South East (including London)
Current arrears balance	£0	£436.59	£1,689.95
Performing arrangement	N/A	No	Yes
Foreclosure frequency (FF) calculations at AAA level	Example 1	Example 2	Example 3
Loan number	**1**	**2**	**3**
Original valuation	£75,000	£75,000	£165,000
Original loan to value (%)	45.5	73.0	90.0
	= £34,155/£75,000	= £54,750/£75,000	= £148,500/£165,000
Base foreclosure frequency	12	12	12
Adjustment factors by loan characteristic:			
Loan to value	0.52	1.00	2.30

Table 23

Foreclosure Frequency And Loss Severity Calculation Examples For Three Sample Loans (cont.)			
Self-certification of income	1.0	1.5	1.5
	--	Income is self-certified and loan is seasoned but in arrears	Income is self-certified and loan is seasoned but in arrears
Income multiple	1	1	1
	Current loan balance = 3.46x first income, so no adjustment	Income is self-certified, so no income multiple adjustment applies	Income is self-certified, so no income multiple adjustment applies
Cash-out loan	1	1	1.2
First-time buyer (FTB)	1	1.1	1
	Although to an FTB, the loan is seasoned >18 months and performing, so no FTB adjustment applies		
Interest only (with a term of <10 years)	1	1	1
Occupancy status	1	1	1
Any prior-ranking balance	1	1	1
County court judgements	1	1	1
Refinancing loan	1	1	1
Payment shock	1	1.2	1
	--	Because the loan is at a discounted interest rate, risk of a payment shock exists	--
Foreclosure frequency before arrears (%)	6.25	23.77	49.08
	12% x 0.52 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0	12% x 1.0 x 1.5 x 1.0 x 1.0 x 1.1 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.2	12% x 2.27 x 1.5 x 1.0 x 1.2 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0 x 1.0
Bankruptcy test	No impact	No impact	No impact
Number of months in arrears	0	1	1.48
	= Current arrears balance/monthly payment = 0	= Current arrears balance/monthly payment = £436.59/£436.59 = 1.0	= Current arrears balance/monthly payment = £1,689.95/£1,138.50 = 1.48
Initial arrears adjustment (%)	0	25.0	25.0
Performing Arrangement	N/A	No	Yes
	--	--	Arrears adjustment is reduced by 50%, as arrears <3 months, an arrangement to repay arrears is in place, and the loan is performing in this respect
Final arrears adjustment (%)	0	25	12.5
	--	This is a flat addition	This is a flat addition
Foreclosure frequency post arrears (%)	6.25	48.77	61.58
Seasoning (months)	67.7	66.7	65.2
Seasoning adjustment	0.75	1	1
	Loan is seasoned > 60 months and <=72 months	Loan is in arrears so no seasoning adjustment	Loan is in arrears so no seasoning adjustment

Table 23

Foreclosure Frequency And Loss Severity Calculation Examples For Three Sample Loans (cont.)			
Foreclosure frequency (%)	4.69	48.77	61.58
Loss severity (LS) calculations at the AAA level	Example 1	Example 2	Example 3
Loan number	**1**	**2**	**3**
Haircut original valuation (OV)	£71,429	£75,000	$165,000
	Haircut for desktop valuation of 5% of original valuation	Full appraisal	Full appraisal
	= £75,000/1.05		
Fully indexed valuation	£73,117	£67,084	£172,162
	100% indexation applied to haircut OV, from origination date (April 12, 2006) to date of analysis	100% indexation applied to haircut OV, from origination date (May 12, 2006) to date of analysis	100% indexation applied to haircut OV, from origination date (June 26, 2006) to date of analysis
Repossession market-value decline (Repo MVD; %)	45.38	48.84	53.85
Property value after Repo MVD (gross recoveries)	£39,937	£34,319	£79,457
Foreclosure costs	£1,280	£2,190	£5,940
	Costs at 4% of outstanding loan balance	Costs at 4% of outstanding loan balance	Costs at 4% of outstanding loan balance
Total due (excluding interest)	£33,280	£56,940	£154,440
	= Current loan balance + foreclosure costs = £32,000 + £1,280 = £33,280	= Current loan balance + foreclosure costs = £54,750 + £2,190 = £56,994	= Current loan balance + foreclosure costs = £148,500 + £5,940 = £154,440
Loss (excluding interest)	£0	£22,621	£74,983
Loss severity (excluding interest; %)	0	41.32	50.49
	No loss	Loss excluding interest/outstanding loan balance = £22,621/£54,750	Loss excluding interest/outstanding loan balance =£74,983/£148,500
Foreclosure period	18 months	18 months	18 months
Interest	£7,200	£12,319	£33,413
	Interest on outstanding loan balance for foreclosure period = 15% x 1.5 years x £32,000 = £7,200	Interest on outstanding loan balance for foreclosure period = 15% x 1.5 years x £54,750 = £12,319	Interest on outstanding loan balance for foreclosure period = 15% x 1.5 years x £148,500 = £33,413
Total due (including interest)	£40,480	£69,259	£187,853
	= Total due excluding interest +interest = £33,280 + £7,200 = £40,480	= Total due excluding interest + interest = £56,940 + £12,319 = £69,259	= Total due excluding interest + interest = £154,440 + £33,413 = £187,853
Loss (including interest)	£543	£34,940	£108,396
	= Total due including interest - gross recoveries = £40,480 – £39,937 = £543	= Total due including interest - gross recoveries = £69,259 – £34,319 = £34,940	= Total due including interest - gross recoveries = £187,853 – £79,457 = £108,396
Loss severity (including interest; %)	1.70	63.82	72.99

Table 23

Foreclosure Frequency And Loss Severity Calculation Examples For Three Sample Loans (cont.)

= £543/£32,000	=£34,940/£54,750	= £108,396/£148,500

Based on data as of Nov. 30, 2011. N/A--Not applicable.

Appendix 2: Example Calculations (Repossession Market-Value Decline)

279. Table 24 below shows some examples of the Repo MVD under these criteria (see ¶¶191-192). The data show the Repo MVD for each region and rating level on the following dates:

- Sept. 30, 2011,
- March 31, 2009 - approximate trough of the market in current cycle,
- Sept. 30, 2007 - peak of the market in current cycle,
- Dec. 31, 1992 - approximate trough of the market in previous recession, and
- June 30, 1989 - approximate peak of the market before previous recession.

Table 24

Repossession Market-Value Declines On Various Historical Dates By Region

	--Rating category--					
Repo MVD on Sept. 30, 2011 (%)	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**
East Anglia	51	47	40	36	33	30
East Midlands	49	46	39	35	32	29
North	50	46	39	35	32	29
North West	49	45	39	35	32	29
Northern Ireland	45	42	36	32	30	27
Scotland	45	42	36	32	30	27
South East (including London)	54	50	42	38	34	31
South West	55	51	43	38	35	31
Wales	53	49	42	37	34	30
West Midlands	50	46	39	35	32	29
Yorks and Humber	46	43	36	33	30	28
Repo MVD on March 31, 2009 (%)	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**
East Anglia	47	44	37	34	31	28
East Midlands	49	46	39	35	32	29
North	55	50	43	38	35	31
North West	50	47	40	36	32	29
Northern Ireland	61	56	47	42	38	33
Scotland	48	44	38	34	31	28
South East (including London)	50	47	40	35	32	29
South West	55	50	43	38	34	31
Wales	51	47	40	36	33	30
West Midlands	51	48	40	36	33	30
Yorks and Humber	46	43	37	33	30	28

Table 24

Repossession Market-Value Declines On Various Historical Dates By Region (cont.)

Repo MVD on Sept. 30, 2007 (%)	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**
East Anglia	63	58	49	43	39	34
East Midlands	64	59	50	44	39	35
North	67	61	51	45	40	36
North West	64	58	49	43	39	34
Northern Ireland	75	75	71	61	54	46
Scotland	58	53	45	40	36	32
South East (including London)	67	61	51	45	40	36
South West	68	62	52	46	41	36
Wales	68	62	52	46	41	36
West Midlands	64	59	50	44	39	35
Yorks and Humber	59	54	46	41	37	33
Repo MVD on Dec. 31, 1992 (%)	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**
East Anglia	35	34	29	27	25	24
East Midlands	39	37	32	29	27	25
North	42	39	33	30	28	26
North West	44	41	35	32	29	27
Northern Ireland	30	30	25	24	23	22
Scotland	40	38	33	30	28	26
South East (including London)	34	33	28	26	25	23
South West	36	35	30	27	26	24
Wales	41	39	33	30	28	26
West Midlands	42	40	34	31	29	26
Yorks and Humber	39	37	31	29	27	25
Repo MVD on June 30, 1989 (%)	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**
East Anglia	66	60	50	44	40	35
East Midlands	63	58	49	43	39	34
North	50	47	40	35	32	29
North West	51	48	40	36	33	30
Northern Ireland	34	33	28	26	25	23
Scotland	46	43	37	33	30	28
South East Inc. London	62	57	48	43	38	34
South West	63	58	49	43	39	34
Wales	57	53	45	40	36	32
West Midlands	60	55	47	41	37	33
Yorks and Humber	54	50	43	38	34	31

Repo MVD--Reposession market-value decline.

280. Table 25 shows the corresponding degree of calculated over- or undervaluation as of Sept. 30, 2011, for modeling purposes, using the estimation method in these criteria

Table 25

Estimated Undervaluation Or Overvaluation Of U.K. Property Markets

As Of Sept. 30, 2011

Region	(Undervaluation)/overvaluation (%)
East Anglia	12
East Midlands	7
North	8
North West	6
Northern Ireland	(4)
Scotland	(3)
South East (including London)	17
South West	20
Wales	16
West Midlands	9
Yorks and Humber	(1)

RELATED CRITERIA AND RESEARCH

All articles listed below are available on RatingsDirect on the Global Credit Portal, unless otherwise stated.

- Methodology For Applying RMBS Small Pool Adjustment Factor, May 24, 2012
- Outlook Assumptions For The U.K. Residential Mortgage Market, Dec. 9, 2011
- Request For Comment: U.K. RMBS Methodology And Assumptions, Sept. 15, 2011
- Australian RMBS Rating Methodology And Assumptions, Sept. 1, 2011
- Revised Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans Incorporated Into LEVELS Version 7.3, June 1, 2011
- Principles Of Credit Ratings, Feb. 16, 2011
- Counterparty And Supporting Obligations Methodology And Assumptions, Dec. 6, 2010
- U.K. Public Spending Cuts May Exacerbate North-South Divide In Mortgage Risk, Nov. 4, 2010
- Credit Rating Model: CIR (Cox-Ingersoll-Ross) Interest Rate Model, Nov. 3, 2010
- The Time Dimension Of Standard & Poor's Credit Ratings, Sept. 22, 2010
- Credit Rating Model: WAFF And WALS Credit Model For U.K. Residential Mortgages, Aug. 17, 2010
- Standard & Poor's Updates Mortgage Originator And Underwriting Review Criteria For U.S. RMBS, May 5, 2010
- Methodology: Credit Stability Criteria, May 3, 2010
- Methodology For Seasoned Loans In U.S. RMBS Transactions, April 30, 2010
- Methodology And Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans, Sept. 10, 2009
- Understanding Standard & Poor's Rating Definitions, June 3, 2009
- How Falling Interest Rates Could Inflate Arrears Reported In European RMBS, April 30, 2009
- Methodology And Assumptions: Update To The Cash Flow Criteria For European RMBS Transactions, Jan. 6, 2009
- Methodology And Assumptions: Update To The Criteria For Rating U.K. Residential Mortgage-Backed Securities, Jan. 6, 2009
- Standard & Poor's Enhanced Mortgage Originator And Underwriting Review Criteria For U.S. RMBS, Nov. 25, 2008
- Standard & Poor's To Explicitly Recognize Credit Stability As A Rating Factor, Oct. 15, 2008
- U.K. Nonconforming Lenders Face Rising Losses On Repossessions Sold At Average 15% Discount, Sept. 15, 2008

- Rating Review Triggers Facilitate Surveillance Of European RMBS Securitizations, June 19, 2007
- Guidelines For The Use Of Automated Valuation Models For U.K. RMBS Transactions, Sept. 26, 2005
- Treatment Of Flexible Mortgage Loans In U.K. RMBS Transactions, April 6 2005
- Cash Flow Criteria For European RMBS Transactions, Nov. 20, 2003
- Criteria For Rating U.K. Reverse Mortgage-Backed Securities, Aug. 8, 2002
- Revised Criteria For Rating U.K. Residential Mortgage-Backed Securities, July 5, 2001

BIBLIOGRAPHY

- Aldcroft, D.H. (1986). The British Economy, Volume I: The Years of Turmoil 1920-1951. Brighton, Sussex: Harvester Press.
- Barro, J.R., & Ursúa, J.F. (2008). Macroeconomic Crises Since 1870, Working Paper No. 13940. Cambridge, MA: National Bureau of Economic Research.
- Constantine, S. (1980). Unemployment In Britain Between The Wars. Seminar Studies in History. Pearson Education.
- Hicks, J., & Allen, G. (1999). A Century of Change: Trends In U.K. Statistics Since 1900, Research Paper 99/111, House of Commons, Social and General Statistics.
- Office for National Statistics (http://www.statistics.gov.uk).

These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.

Additional Contact:
Farid Shavaksha, London (44) 20-7176-3935; farid_shavaksha@standardandpoors.com

Copyright © 2014 Standard & Poor's Financial Services LLC, a part of McGraw Hill Financial. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription) and www.spcapitaliq.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.