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Criteria | Structured Finance | RMBS:

Dutch RMBS Methodology And Assumptions

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Dutch RMBS Methodology And Assumptions

1. Standard & Poor's Ratings Services is publishing its methodology and assumptions for rating Dutch residential mortgage-backed securities (RMBS). This follows our request for comment "Request for Comment: Dutch RMBS Methodology And Assumptions," published June 12, 2015, on RatingsDirect. For a summary of the changes relative to the Request for Comment, see "RFC Process Summary: Standard & Poor's Summarizes The Request For Comment Process For Dutch RMBS Criteria," published Dec. 24, 2015.

2. The changes align the criteria for Dutch RMBS closely with the global RMBS framework, as outlined in "Methodology And Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans," published Sept. 10, 2009, "Australian RMBS Rating Methodology And Assumptions," published Sept. 1, 2011, and "U.K. RMBS Methodology And Assumptions," published Dec. 9, 2011.

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. The criteria:

   - Fully supersede "Dutch RMBS Market Overview And Criteria," published Dec. 16, 2005;
   - Fully supersede "Assessing The NHG Guarantee In Dutch RMBS Transactions—A Prudent Approach," published June 11, 2008;
   - Partly supersede "Methodology And Assumptions: Update To The Cash Flow Criteria For European RMBS Transactions," published Jan. 6, 2009 (relating to Dutch RMBS); and
   - Partly supersede "Cash Flow Criteria for European RMBS Transactions," published Nov. 20, 2003 (relating to Dutch RMBS).

I. SCOPE OF THE CRITERIA

5. The criteria apply to all new and existing ratings on Dutch RMBS and to the analysis of Dutch residential mortgage-covered bonds.

6. The criteria constitute a starting point for assessing portfolios that vary substantially from historical pools and for analyzing structures that involve structure-specific risks.

II. SUMMARY OF THE CRITERIA

7. These criteria: (i) adopt the global framework and methodology for analyzing the credit quality of RMBS (paragraphs 9-17 and paragraphs 21 and 22) and (ii) revise modeling and cash flow assumptions for typical Dutch RMBS transactions (paragraphs 18-20).

8. The criteria aim to increase the comparability of RMBS ratings globally and across sectors, and to increase the

transparency of the rating analysis.

9. As with the global RMBS framework, we start by setting an anchor point of 'AAA' projected losses for an archetypical pool (defined below) that provides a benchmark against which all Dutch residential mortgage loan pools are compared and measured, both in terms of the credit support provided and each portfolio's particular risk characteristics.

10. The global RMBS framework defines the concept of an archetypical mortgage loan pool. The characteristics of the archetypical pool for the Dutch residential mortgage market include:

    - A pool of at least 250 loans, geographically distributed across the Netherlands, and that carry a fixed or fixed-reset rate.
    - Loans that are nondelinquent and have been outstanding for less than 60 months.
    - Loans that will be fully amortized or are long-dated, interest-only loans (nonamortizing loans whose terms are at least 10 years), have no initial interest-discount period, and where the originator has assessed the borrower's income.
    - Loans to finance the purchase of a residential property for owner occupation or to refinance the balance on an existing loan (and where the lender has fully re-underwritten the loan).
    - Loans secured by a first-lien mortgage on the property financed with the loan proceeds.
    - Loans to borrowers that are private individuals, are not self-employed, have no adverse credit history, and whose loan-to-income multiple (loan size divided by borrower's annual pretax income) is 3.5x.
    - Loans granted at a loan-to-value (LTV) ratio of 85%.
    - Loans with full valuations on the mortgaged property from a real estate appraiser or with tax valuations that, in either case, are not "jumbo" valuations (i.e., exceeding €500,000).
    - Loans that do not have the benefit of the Nationale Hypotheek Garantie (NHG) program.

11. The criteria set projected losses at 6.7% for an archetypical Dutch mortgage loan pool underlying RMBS at the 'AAA' rating level.

12. The 'AAA' projected loss anchor of 6.7% compares with the 'AAA' anchor points in the global RMBS framework of: (i) 7.5% for the archetypical U.S. mortgage loan pool, (ii) 5% for the archetypical Australian pool, and (iii) 6.0% for the archetypical U.K. pool. The 'AAA' anchor for Dutch RMBS differs from the anchors in the global RMBS framework because of: (i) the local attributes of the archetypical Dutch pool (in particular, the archetypical Dutch pool has a higher LTV ratio, which results in higher loss severities, all else being equal) and (ii) the environment stemming from the legal system and the structural features of the Dutch mortgage market. The calibration of the 'AAA' anchors draws from comparable historical scenarios of extreme stress.

13. The criteria apply adjustment factors for nonarchetypical pools, resulting in different levels of projected losses from that of the archetype (see table 1). Nonarchetypical pools are those with characteristics that differ from the Dutch archetypical pool.

Table 1

Adjustment Factors For Nonarchetypical Loan, Borrower, And Property Characteristics

Criteria paragraph(s)	Loan characteristic	Adjustment factor	Component of credit enhancement the factor affects
77-82	OLTV ratio	A multiple that increases incrementally from 0.7x, for loans with an OLTV ratio <= 60%. The adjustment is 1.0x for loans with an OLTV ratio of 85%, with a limit at 3.0x for an OLTV ratio >= 110%	Foreclosure frequency
83-86	Elapsed loan term (seasoning)	0.75x for seasoning >5 and <=6 years	Foreclosure frequency
		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)	
87-89	Self-employed borrower*	A multiple of 1.25x	Foreclosure frequency
	Self certification of income*	A multiple of 1.5x	Foreclosure frequency
		Removed gradually starting from loan seasoning of >12 months	
		No income multiple adjustment factor	
90-91	Loan-to-income (LTI) income multiple	A multiple of 0.8x to 1.5x (for LTI multiples of 1x to 7x; 1x at LTI=3.5x)	Foreclosure frequency
92	Loans to purchase a second home	A multiple of 1.3x	Foreclosure frequency
93-95	Negative credit history§	A multiple of between 1.5x and 4.3x for BKRs, depending on the number, status and type of BKRs	Foreclosure frequency
		A default frequency of 50%, subject to some but not all adjustments in this table, for at least one negative BKR and an SR credit category registration	Foreclosure frequency
96-99	Short-term interest-only loans (with an initial term of less than 10 years)	A multiple of 1.5x	Foreclosure frequency
100-101	Remortgage loans (refinancing mortgage loans)	A multiple of 1.1x for refinancing (1.0x if full re-underwriting applies)	Foreclosure frequency
		A multiple of 1.2x for cash outs	
102	Buy-to-let loans	A multiple of 1.7x	Foreclosure frequency
104-105	Payment shock (a sudden rise in monthly payments)	A multiple of 1.2x for mortgage loans with payment shock features (other than fixed-reset loans and floating rate loans)	Foreclosure frequency
106	Second-lien mortgage loan	A multiple of 1.67x	Foreclosure frequency
107-108	Floating-rate loans	A multiple of 1.1x	Foreclosure frequency
109-110	Construction loans	A multiple of 1.2x, or 1.5x, depending on the size of the construction deposit relative to the loan balance	Foreclosure frequency
111-115	Pool-level adjustment	A small-pool adjustment	Foreclosure frequency
126-128		A multiple of 0.7x to 1.3x (this adjustment accounts for increased or reduced portfolio risks)	
116	Geographic concentration	A multiple of 1.1x for concentration in any province depending on province-specific concentration limits	Foreclosure frequency
117-125	Mortgage loan arrears	Arrears matrix	Foreclosure frequency
129-131	Jumbo valuation (for valuations >€500,000)	A multiple of up to 1.2x to market value decline assumptions	Loss severity

Table 1

Adjustment Factors For Nonarchetypical Loan, Borrower, And Property Characteristics (cont.)			
132-134	Valuation haircut	Haircut of 5.0% to valuations other than full appraisals or tax valuations, for loss severity calculations only	Loss severity
135	Construction loans	A multiple of 1.15x to the market value decline, depending on the size of the construction deposit relative to the loan balance	Loss severity
161-165	NHG loans	A loss severity adjustment	Loss severity
141	Maximum foreclosure frequency	100% at loan and pool level	Foreclosure frequency

*Self-employed borrower has self-certified their income or their income has not been verified, apply the higher of the self-certified adjustment and self-employed adjustment. §SR credit category registration relates to a loan used to rearrange previous credit. OLTV--Original loan-to-value. BKR--Bureau Krediet Registratie. NHG--Nationale Hypotheek Garantie.

14. The criteria reflect Standard & Poor's outlook on the Dutch mortgage and credit markets by matching estimates of probable losses in a pool to the 'B' projected loss level.

15. The losses at the 'AA+' to 'B+' rating levels are interpolated from the 'AAA' anchor point and the 'B' projected losses and therefore tend to vary with changes in the outlook. The increase in projected losses is greater at lower rating levels. Projected losses at the 'AA' rating level, for instance, are expected to be less sensitive to changes in the outlook than 'BB' projected losses.

16. These criteria set projected losses for the archetypical Dutch 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). It also provides a framework for adjusting assumptions when starting conditions are more adverse than benign (see Section D. How Changes In The Dutch Mortgage Market Outlook Could Affect The Rating Analysis, paragraphs 63-67).

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

Table 2

Projected Losses For The Archetypical Dutch Pool Under Benign Starting Conditions			
Rating category	**Projected loss level (%)**	**Foreclosure frequency component (%)**	**Loss severity component (%)**
AAA	6.7	11.5	58.5
AA	4.2	7.6	55.0
A	2.7	5.7	48.0
BBB	1.6	3.7	43.0
BB	0.7	1.8	40.0
B	0.5	1.3	37.0

18. The analysis of Dutch RMBS also includes an analysis of a transaction's payment structure and cash flow mechanics.

19. 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.

20. The criteria include several cash flow assumptions for modeling typical Dutch RMBS structures (see table 3).

Table 3

Cash Flow Modeling Assumptions For Dutch RMBS

Criteria paragraph(s)	Modeling variables	Modeling parameters
177-180	Amount of defaults	Periodic application of front-loaded and back-loaded default curves matching the payment profile of underlying assets*
181-182	Recession timing	Two different starting points: At inception and at the end of year three
183	Timing of recoveries	Foreclosure period of 18 months (24 months for NHG loans)
184	Delinquencies	Payment delays equivalent to one-third of the pool's foreclosure frequency for scheduled interest and principal
185-186	Interest rate risk	Five interest rate curve paths: (i) up, (ii) down, (iii) up/down, (iv) down/up, and (v) forward
187-195	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
196-205	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', 'AA+', and 'AA' levels
		A recessionary level for the duration of the recession at all rating levels
206-207	Reinvestment rates	A rating-specific margin applies, with a reinvestment rate floor of 0%
208-214	Originator insolvency: Commingling and set-off	Commingled and set-off amounts depend on individual characteristics
215-216	Fees and expenses paid before settling rated debt	Modeling of servicing fees uses a minimum stressed cost of 35 basis points (bps) or 50 bps, depending on the loan type
159/217	Mortgage loan foreclosure costs	4% of loan balance
219-221	Liquidity facilities	Assumed fully drawn as of day 60, with the issuer paying the drawn fee
222-223	Pool yield compression	Spread compression depends on individual pool characteristics
225-227	Cash flow assumptions specific to master issuer 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 and trigger events
228		Specific runs to test, e.g., repayment of hard bullet securities
229-230		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). NHG--Nationale Hypotheek Garantie.

21. If the attributes of an actual asset pool indicate better credit quality than the archetype, the pool's projected losses could be lower than those in table 2.

22. If this is the case, the criteria set a "floor" or minimum projected losses of 4.00% at the 'AAA' rating level and 0.35% at the 'B' level.

III. IMPACT ON OUTSTANDING RATINGS

23. We tested the criteria on a sample of representative Dutch RMBS transactions.

24. On application of these criteria, we expect less than 15% of ratings outstanding on Dutch RMBS to be negatively affected, with downgrades of one notch in approximately 40% of cases. We expect that the effect will mostly be concentrated on the lower investment-grade and speculative-grade rating levels. Application of these criteria could also lead to a limited number of minor upgrades.

25. Given our current outlook on the Dutch housing and mortgage market, as well as on the overall economy, our impact testing used the same base assumptions noted in table 4 and table 13 at all rating levels, reflecting our assessment of benign starting conditions. In addition, our assessment of the degree of over- or undervaluation of the property market in the Netherlands (see paragraphs 151-153) reflects an overvaluation of approximately 6% at the national level.

26. It should be noted that the actual ratings impact on individual Dutch RMBS transactions may vary, depending on the specificities of the asset pool and the individual characteristics and features of a structure. In particular, ratings on transactions whose collateral includes mortgage loans that are less seasoned could be marginally more affected. In addition, any rating changes will also reflect the pool's prevailing performance and the anticipated future performance of the underlying portfolio.

27. We generally do not expect the criteria to impact our ratings on Dutch residential mortgage covered bonds.

IV. EFFECTIVE DATE AND TRANSITION

28. These criteria are effective for all in-scope ratings on Jan. 18, 2016.

29. We expect to complete our review of all existing Dutch RMBS and residential mortgage covered bond ratings within six months of the effective date.

V. METHODOLOGY AND ASSUMPTIONS

30. The criteria aim to enhance the comparability of Standard & Poor's issue ratings on Dutch RMBS with ratings in other sectors, other areas of structured finance, and RMBS ratings globally, and to increase the transparency of the rating analysis.

31. The alignment of the Dutch RMBS criteria with the global RMBS framework aims to achieve this ratings comparability.

32. To analyze a particular characteristic of Dutch residential mortgages, the criteria primarily use available performance data in the local markets. In the absence of available performance data for certain aspects of Dutch mortgage loans, these criteria may adopt the approach as outlined in criteria for other countries, if the characteristics are comparable.

33. The U.K. RMBS criteria were the first in Europe to be recalibrated and constitute a starting point (see "U.K. RMBS Methodology And Assumptions," published Dec. 9, 2011). For certain characteristics of the Dutch market, the criteria

call for adopting the approach in other jurisdictions, if these characteristics compare more closely.

34. The criteria develop a specific analytical approach for cases where a unique feature of Dutch RMBS does not allow a direct comparison with the global RMBS framework.

VI. METHODOLOGY: CREDIT QUALITY OF THE SECURITIZED ASSETS

35. A key step in analyzing the credit quality of the securitized assets underlying a Dutch RMBS transaction is to calculate the amount of projected losses in a mortgage loan pool, under conditions of corresponding stress, commensurate with certain issue ratings.

36. Our projected losses consist of two components: (i) foreclosure frequency and (ii) loss severity (see paragraphs 138-144).

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

38. 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).

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

40. The criteria define the attributes of the archetypical Dutch mortgage loan pool and set corresponding benchmarks of projected losses at various rating levels (see table 4). While the foreclosure frequency estimates for the archetypical Dutch pool are comparable with those in the global RMBS framework, the loss severity estimates are higher, mainly due to the archetypical pool including loans granted at an LTV ratio of 85%, which is higher than under the global RMBS framework.

41. The benchmarks of projected losses in table 4 assume benign starting conditions, representing a stable or positive outlook on the Dutch mortgage market and a property market at equilibrium (see Section D. How Changes In The Dutch Mortgage Market Outlook Could Affect The Rating Analysis, paragraphs 63-67). The criteria reflect the current environment prevailing in the Dutch mortgage market in the actual assessment of expected losses.

Table 4

Projected Losses For The Archetypical Dutch Pool Under Benign Starting Conditions

Compared with archetypical pools in other jurisdictions

	AAA	B
	--Projected losses (%)--	
The Netherlands	6.7	0.5*
U.K.	6.0	0.4*
Spain/Ireland	10.5	0.9*
Italy	10.3	0.8*
Portugal	11.5	1.0*

Table 4

Projected Losses For The Archetypical Dutch Pool Under Benign Starting Conditions (cont.)		
Australia/Japan	5.0	0.4*
U.S.	7.5	0.5*
	--Foreclosure frequency (%)§--	
The Netherlands	11.5	1.3*
U.K.	12.0	1.5*
Spain/Ireland	15.0	2.0*
Italy	13.0	1.5*
Portugal	15.0	2.0*
Australia/Japan	10.0	1.1*
U.S.	15.0	1.7*
	--Loss severity (%)§--	
The Netherlands	58.5	37.0
U.K.	50.0	28.0
Spain/Ireland	70.0	45.4
Italy	79.2	54.5
Portugal	76.3	51.7
Australia/Japan	50.0	31.0
U.S.	50.0	30.0

*Given a stable or positive outlook. §The foreclosure frequency and loss severity--including foreclosure costs--are the components of loss levels, for modeling purposes, of an archetypical pool in a property market at equilibrium, taking into account foregone loan interest.

42. The criteria adjust the projected losses of an actual mortgage loan pool if the pool's characteristics deviate from the attributes of the archetypical pool (see Section A. Adjustment Factors For Variations From The Archetypical Pool, paragraphs 74-135).

43. If the attributes of an actual Dutch pool indicate better credit quality than the archetype, projected losses are subject to a floor of 4% for a 'AAA' rating and 0.35% for a 'B' rating. These minimum levels of projected losses are the same as those in the global RMBS framework.

A. The Archetypical Dutch Mortgage Loan Pool

44. The archetypical Dutch mortgage loan pool shows specific characteristics related to the borrowers, loans, security arrangements, and properties (see table 5).

45. Variations from the archetype result in projected loss adjustments (see paragraphs 74-135).

Table 5

Specification Of The Archetypical Dutch Mortgage Loan Pool	
Archetypical characteristics	**Criteria paragraph(s)**
1. Borrower and mortgage loan	
Loan-to-value ratio of 85% at origination	77-82
Borrower is not self-employed	87-89

Table 5

Specification Of The Archetypical Dutch Mortgage Loan Pool (cont.)	
Borrower has no adverse credit history, such as a previous BKR	93-95
The ratio of the loan balance to borrower's pretax annual income (income multiple) is 3.5x	90-91
Loan is not subject to a payment shock due to a sudden rise in monthly payments	104-105
Floating-rate loans	107-108
Construction loans	109-110 and 135
Income-verified loan (lender has verified the borrower's income)	87-89
Loan is not in arrears	117-125
Loan seasoning (elapsed term) of up to 60 months	83-86
Loans are on full repayment terms or are long-dated interest-only loans (nonamortizing mortgage loans with a term of at least 10 years)	96-99
2. Security and property	
First-lien mortgage on the property	106
Loan purpose is purchase of property (or refinancing with full re-underwriting)	100-101
Owner-occupied property and primary residence	92,102
Loan documentation includes a full valuation on the secured property from an appraiser or is based on a tax valuation	132-134
The valuation is not a jumbo valuation (i.e., exceeding €500,000)	129-131
Loan does not have the benefit of the NHG program	161-165
3. Other: Pool characteristics	
No adjustment factor related to the originators (lenders)	126-128
The pool is geographically diversified across the country	
The pool is granular (that is, contains at least 250 loans/borrowers)	

BKR--Bureau Krediet Registratie. NHG--Nationale Hypotheek Garantie.

46. The archetypical Dutch pool has idealized features relative to those observed in historical mortgage loan pools. For instance, loans may have been granted whereby part of the loan may be applied toward the construction of (or improvements to) the related property, or to self-employed borrowers. The underwritten pools may also include large proportions of refinancing loans. In addition, LTV ratios in the actual pools tend to be higher and more widely distributed than that of the archetypical pool.

47. The features of the archetypical Dutch pool overall match those of the archetypical pools defined in the global RMBS framework. The criteria also assume prudent underwriting of the mortgage loans.

48. The criteria adjust for differences among the archetypical pools based on variations in the Dutch mortgage market, relative to other mortgage markets globally.

B. 'AAA' Projected Loss Anchor For Dutch RMBS

49. At the core of the methodology in these criteria is the setting of an anchor point that is consistent with the global RMBS framework and serves as a benchmark of projected losses for the archetypical Dutch mortgage loan pool at the 'AAA' rating level.

50. This fixed 'AAA' projected loss level (or 'AAA' projected loss 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 Dutch pool under an extreme economic stress scenario.

51. The 'AAA' projected loss anchor for the archetypical Dutch pool is 6.7%. This is, for instance, lower than the corresponding anchor point of 7.5% for the archetypical U.S. pool and higher than that of the archetypical U.K. pool, which is 6.0%. These differences partly reflect the variances among the attributes of each archetypical pool.

52. Under the criteria, during normal economic cycles, the 'AAA' anchor would likely remain constant. It may change, however, if economic forecasts and our market outlook indicated moderate to substantial stress for the Dutch mortgage market (see paragraph 64).

53. To maintain a relatively constant 'AAA' anchor during normal housing cycles, the analysis includes adjustments for the likely impact of volatile house prices on real loss severities (see paragraphs 145-165).

C. Rationale For The Anchor Point

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

55. Because mortgage lending in the Netherlands had not yet fully developed in the 1930s or other periods of significant stress in this country, no comparable data are available.

56. However, we can compare relevant features of the Dutch mortgage market with features of the global markets in order to derive our credit assumptions. For instance, various jurisdictional factors in the Netherlands are more similar to those in the U.K. than those in the U.S.:

- First, a mortgage lender in the Netherlands (similar to the U.K.) has full legal recourse to the borrower, which has a bearing on relative propensity to default. Personal insolvency law in the Netherlands is relatively strict and the banks' right of recourse generally does not expire (long discharge periods apply in the U.K.);
- Second, employment protection (the difficulty with which an employee can be dismissed) tends to be stronger than, for instance, in the U.S. In addition, the Netherlands, similar to the U.K., typically provides higher unemployment benefits; and
- Third, the overall structure of the Dutch mortgage market (as in the U.K.) provides for a strong framework because of, for instance, longstanding mortgage market regulation, mortgage payments by direct debit, and a greater propensity for homeowners to remain in the area they live in, relative to other countries such as the U.S., where homeowners are more likely to move for jobs and default on their mortgages as part of the relocation.

57. Of all economic indicators, unemployment is the main metric Standard & Poor's uses for estimating the level of foreclosures (the foreclosure frequency). Unemployment in the Netherlands tends to be lower than in the U.K. and less volatile in the long term, therefore exhibiting more stability. However, the Dutch labor market has features that differ from the U.K. labor market, e.g., the levels of temporary workers and the self-employed.

58. We have observed differences in the performance of mortgage loans in the Netherlands relative to other European

markets, during a period of significant stress. We generally believe that those differences would hold at greater stress levels. Those observations were used to infer our assumptions at the 'AAA' level relative to comparable assumptions in the global RMBS framework.

59. Dutch households are among the most leveraged in Europe, which is in part due to the Dutch fiscal regime applicable to residential mortgages. This high level of mortgage indebtedness is, however, partially offset by significant holdings in other financial assets.

60. The performance of Dutch RMBS during the recessions in 2008-2009 and 2011-2012 was better than that of U.K. prime RMBS, although the U.K. did experience a more severe GDP contraction in 2008-2009.

61. The foreclosure frequency level for the archetypical Dutch mortgage loan pool, which the criteria set at 11.5%, reflects the close alignment of the criteria for Dutch RMBS with those for global RMBS.

62. A part of the analysis leading to the anchor points for projected loss levels for the archetypical Dutch pool draws on comparable data from past recessions in comparable markets. The 'AAA' or extreme stress scenario for modeling the archetypical Dutch pool incorporates data from our analysis of major economic recessions globally (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009). Notably, the data include an unemployment rate of 25%.

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

63. Consistent with the global RMBS framework, the 'B' projected loss level for an archetypical Dutch pool matches assumptions of expected losses, and therefore varies according to changes in the outlook for the Dutch mortgage market.

64. Although the 'AAA' projected loss anchor is fixed under normal economic cycles, projected losses at the 'AA+' to 'B+' rating levels derive from an interpolation between the 'AAA' and 'B' levels and therefore fluctuate relative to the 'B' projected losses. The 'AAA' projected losses could, however, increase if Standard & Poor's forecasts and economic outlook for the Netherlands indicated moderate to substantial market stress.

65. A change in the Dutch 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, delinquencies, defaults, and their roll rates (transition rates);
- Expected house price movements;
- Observed changes in discounts on forced sales; and
- Timing to foreclosure.

66. The revised market outlook contributes to the 'B' projected losses and forms part of the analysis for assigning new Dutch RMBS ratings and the surveillance of existing ratings, at all rating levels.

67. Exceptional economic or housing cycles, including variations in house prices beyond the magnitude observed during normal cycles, could lead to adjustments to our loss severities 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 projected loss level--specifically, loss severity--includes corresponding adjustments to market-value declines (see paragraphs 145-165).

E. Surveillance

68. 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 Dutch pool may deviate from those of the archetype over the pool's life.

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

70. Rating changes resulting from surveillance emanate from changes in the performance of a pool and the analysis of pool performance data and trends. Changes in the ratings on supporting counterparties and in the rating on the sovereign could also have an effect on the ratings on the notes.

71. For a given Dutch RMBS portfolio with changed pool characteristics, our surveillance analysis uses the methodology and assumptions described in this document. In applying these criteria to our rating analysis, our surveillance also considers our forward looking view, and our expectations for the transaction and the RMBS market more generally.

VII. ASSUMPTIONS: ADJUSTMENTS AND MODELING

72. The criteria provide a set of adjustment factors leading to different projected loss levels when features of a mortgage loan pool vary from those of the archetypical Dutch pool. The examination of loan performance data and behavioral trends across mortgage markets in the Netherlands and elsewhere formed the basis of these assumptions. The criteria seek to align the adjustment factors in the Dutch RMBS criteria with those linked to equivalent assumptions for the U.K. RMBS criteria and the global RMBS framework, where relevant.

73. The criteria also provide a set of modeling assumptions (see paragraphs 166-230).

A. Adjustment Factors For Variations From The Archetypical Pool

74. The criteria provide adjustment factors relating to a borrower's credit profile, features of mortgage loans and property values, and other pool-level characteristics (e.g., originator adjustments).

75. Based on performance and trend observations, the criteria seek to align the adjustment factors with those linked to

equivalent assumptions in the U.K. RMBS criteria and the global RMBS framework, where relevant. As discussed above, the Dutch RMBS criteria use the U.K. RMBS criteria and also use the global RMBS framework 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.

76. The criteria apply most adjustment factors as multiples of projected losses. Specifically, when computing projected losses at a loan and pool levels, the adjustments (listed below) are applied to either the foreclosure frequency or loss severity calculation, to modify the projected losses of an archetypical pool.

- Adjustment factors affecting the foreclosure frequency calculation: Default frequency multiple for LTV ratio; loan seasoning; self-employed borrower; loan-to-income multiple; borrower occupancy status; interest-only loans; remortgage loans; buy-to-let loans; payment shock; second-lien mortgage; loan interest type; loan repayment type; borrower credit quality; small-pool adjustment; geographic concentration; originator adjustment; and foreclosure frequency flat addition for arrears analysis.
- Adjustment factors affecting the loss severity calculation: Jumbo valuations (multiple applied to the market-value decline assumption); valuation haircuts; construction loans; in addition, the computation of loss severity reflects the degree of over- or undervaluation of a property (see paragraphs 145-165).

(See the sections below for more details.)

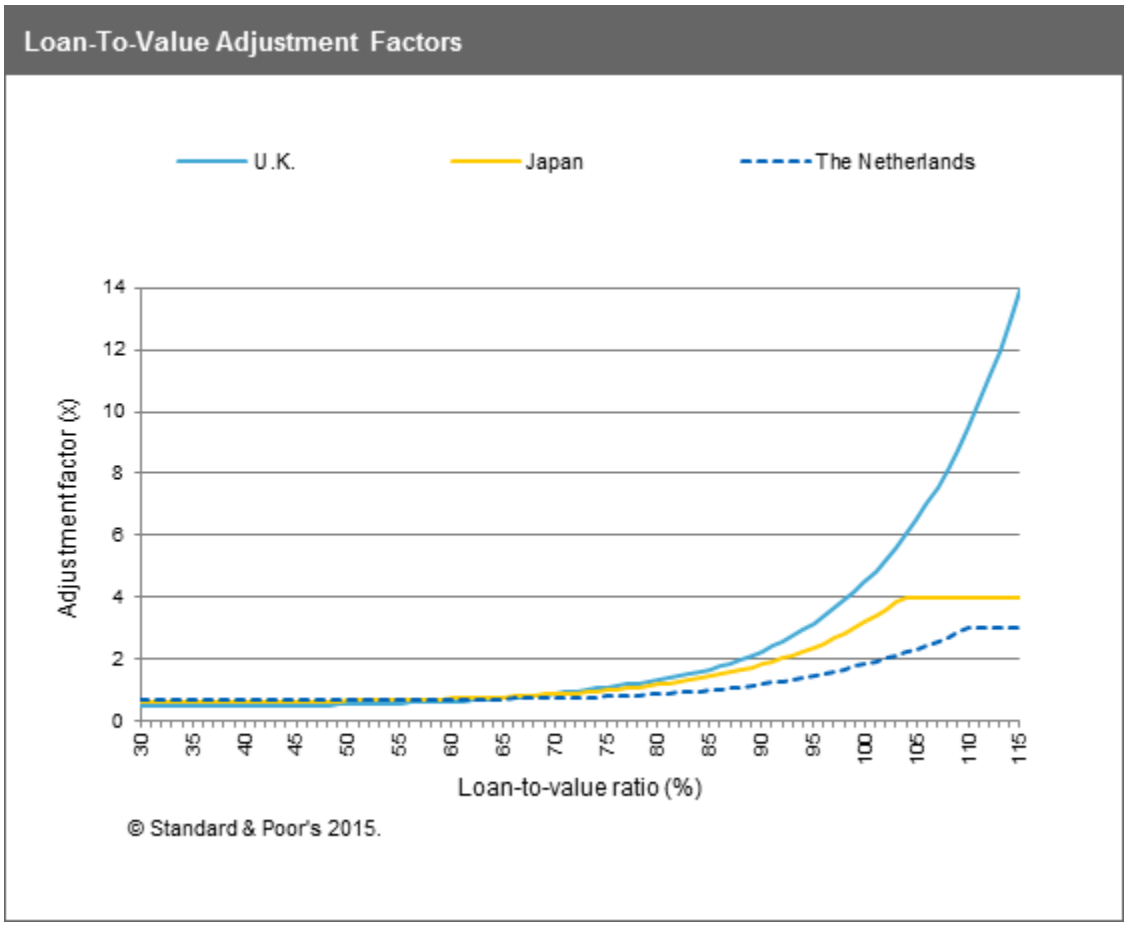
A.1. Adjustment factors for a borrower's credit features and leverage

a) Loan-to-value ratio

77. The adjustment factors for varying LTV ratios result from a function (based on a multiple of 0.7x for an LTV ratio of 60% or lower) that increases the adjustment factors for higher LTV ratios (see chart 1). The curve used for the LTV ratio adjustment factor differs from those used in the U.K. RMBS criteria and the global RMBS framework, primarily reflecting the observed performance of Dutch mortgage loans at high LTV ratios (95% or more). This follows on from the Dutch fiscal regime, which allows very favorable tax deductions of mortgage interest payments. It provides borrowers with strong incentives to maximize the outstanding principal balance on their mortgages for as long as possible, thereby increasing the tax benefits over the life of the loan. However, the introduction of changes to the Dutch fiscal regime has reduced these incentives. We consider that the use of LTV ratios as the key measure of creditworthiness of borrowers in the Dutch market is therefore not directly comparable to other mortgage markets where tax incentives are absent or less pronounced. Performance observations from Dutch pools formed the basis of the curve for LTV ratios (see chart 1), particularly at lower LTV levels.

78. The neutral adjustment of 1.0x represents the archetypical LTV ratio level of 85%.

Chart 1



79. The criteria use the original LTV (OLTV) ratio in applying the LTV ratio adjustment factor. This is because the criteria estimate default propensity relative to a borrower's initial investment or equity.

80. Given the performance of Dutch mortgage loans with high LTV ratios (even exceeding 100%), the criteria limit the LTV ratio adjustment factor at 3.0x.

81. Combining these factors results in a lower adjustment factor for high LTV ratio loans in the Netherlands relative to other markets such as the U.S., the U.K., and Japan. For instance, our Japanese RMBS criteria cap the LTV ratio adjustment factor at a multiple of 4x, and the LTV ratio curve in those criteria generally produces higher adjustment factors than under these Dutch RMBS criteria (see "Methodology And Assumptions For Rating Japanese RMBS," published Dec. 19, 2014). The criteria take into consideration differences between the two mortgage markets, the history of mortgage lending at high LTV ratios in the two jurisdictions, relative tax benefits for interest rate deductions, as well as the interplay with other adjustment factors in both criteria, notably with regard to leverage and loan/debt-to-income ratios (see paragraphs 90-91 and table 8).

82. Where foreclosure values on properties in a pool are provided to us but market valuations are not available, we may gross up the foreclosure values to arrive at a market valuation for the purpose of applying these criteria. In the Dutch

market, it was standard practice to refer to the foreclosure value of a property, being the estimated value of a property in a forced sale rather than the market valuation. In these instances, under the criteria the foreclosure value represents about 85%-95% of the market valuation of the property.

b) Loan seasoning

83. The criteria align seasoning adjustments with comparable adjustments in other jurisdictions and define a "seasoned" loan as one that has been outstanding for 60 months or more and is not in arrears. No seasoning adjustment is applied to loans that have been outstanding for less than 60 months or are in arrears.

84. Historical data show that loans with at least 60 months of seasoning at the closing of a transaction perform better than loans with similar characteristics but no seasoning at closing.

85. Seasoned loans are associated with a lower likelihood of foreclosure, for which the criteria assign a credit factor (see table 6). As the typical Dutch mortgage will have several loan parts, the seasoning credit is based on the origination date of the earliest loan part. The loan seasoning adjustment also reflects the lower predictability of initial loan characteristics over time, relative to actual loan performance.

86. If corresponding data is available, the criteria may consider the seasoning of the performing relationship between the borrower and the mortgage lender in relation to an existing mortgage loan being refinanced, instead of the seasoning of the individual new loan that results from such refinancing. For instance, a loan may have been refinanced with a new loan whose term is the same or shorter than the existing loan, and the loan balance and interest rate are the same or lower than the existing loan. In that case, seasoning could be based on the origination date of the original loan rather than the date of the refinancing.

Table 6

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

*Factor only applies to loans that are not in arrears.

c) Self-employed borrower and self-certification of income

87. The criteria apply an adjustment factor of 1.25x to self-employed borrowers. Self-employed workers derive their salaries from their own business rather than from a permanent job contract and we can expect less income stability. Performance data confirm that they are more likely to default than borrowers in contractual employment. The criteria apply an adjustment factor of 1.5x to borrowers who self-certify their incomes. If a self-employed borrower has self-certified their income (i.e., income has not been verified), the criteria apply the higher of the self-certified adjustment and the self-employed adjustment.

88. The self-certification and self-employed adjustment factors only apply if the borrower also occupies the property, given that lenders use different underwriting procedures for buy-to-let loans.

89. The 1.5x adjustment factor for self-certified Dutch 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 7).

Table 7

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.

d) Loan-to-income multiple

90. As shown in table 8, a loan that reflects a loan-to-income (LTI) multiple (the borrower's outstanding loan balance divided by a borrower's annual pre-tax income) of up to 3.5x meets the specification for the archetypical Dutch pool. Table 8 includes details of adjustment factors for LTI multiples in other jurisdictions.

91. For a LTI multiple of between 3.5x and 7.0x, the criteria apply an increased adjustment factor, and limit the adjustment factor at 1.5x if the borrower's outstanding loan balance is greater than or equal to 7.0x a borrower's income. For a LTI multiple below 3.5x, the criteria apply a reduced adjustment factor, and floor the adjustment factor at 0.8x (see chart 2). In the event of co-borrowers, the criteria consider both borrowers' incomes when determining the adjustment factor.

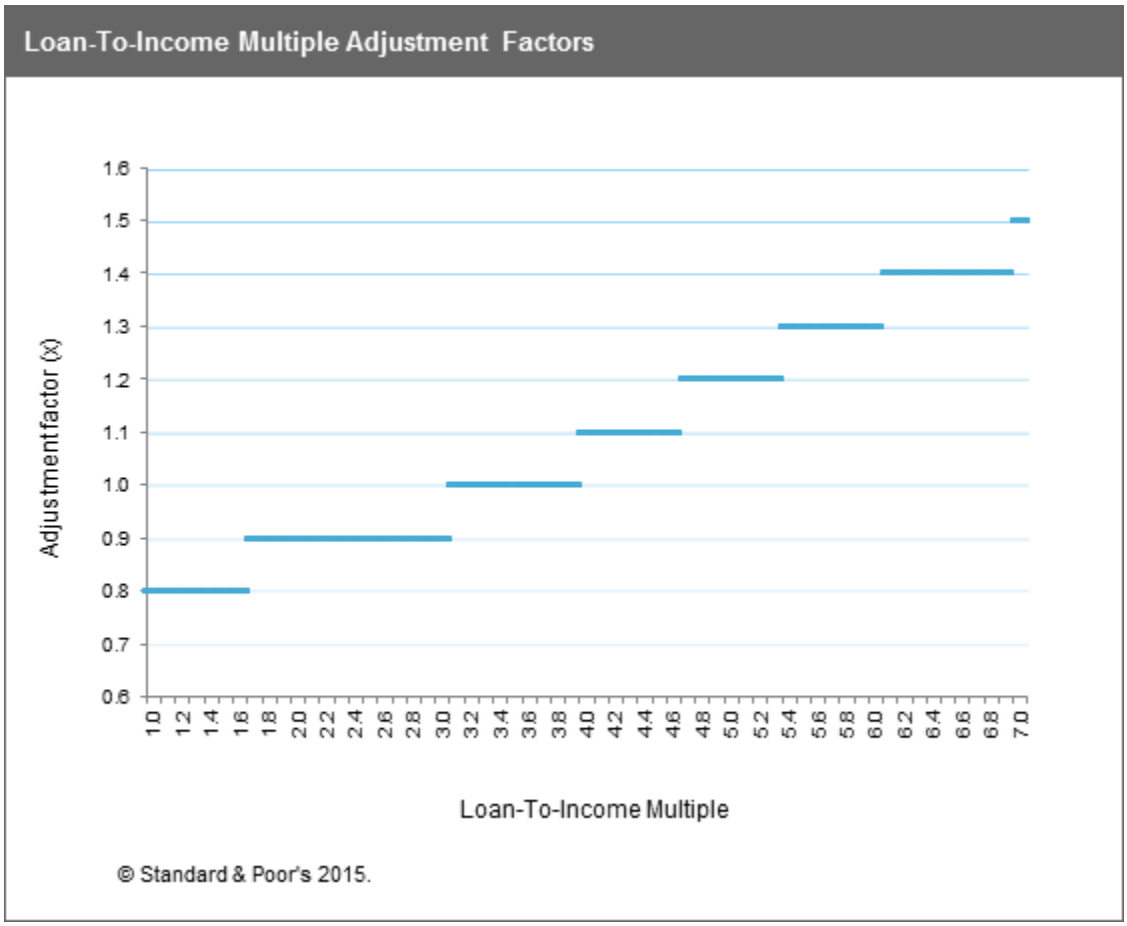
Table 8

Adjustment Factors For Loan-To-Income Multiples

The Netherlands	0.8x to 1.5x (for LTI multiples of 1x to 7x; 1x at LTI=3.5x)
U.K.	1.5x if income multiple is >5x
	1.2x if income multiple is >3.5 and <=5 (no adjustment for loans older than 18 months, if current)
Japan	Adjustment of 0.8x if DTI ratio is <25%
	Maximum adjustment: 1.8x for DTI >60%

LTI--Loan-to-income. DTI--Debt-to-income.

Chart 2



e) Borrower occupancy status: Loans to purchase a second property

92. The criteria align with comparable adjustments in other jurisdictions and apply a 1.3x adjustment factor to any loan granted to purchase a property that is not the first property. Borrowers tend to default first on the payment of the mortgage on the second property to avoid being evicted from the first residence.

f) A borrower's negative credit history: BKR ("Bureau Krediet Registratie") registrations

93. The criteria apply adjustment factors that increase the required credit enhancement for borrowers with negative BKRs (see table 9). A borrower's previous credit history is an indicator of future debt repayment trends and may influence the likelihood of default in the future.

94. The criteria apply an additional 1.2x adjustment factor if the negative BKR is current, i.e., arrears have not been cured, and an additional 1.2x adjustment factor if the negative BKR is on a mortgage loan.

95. If a borrower has had one or more negative BKRs and an SR credit category registration (an SR credit category registration relates to a loan used to re-arrange previous credit), the criteria establish a default frequency equal to the greater of: (i) 50% and (ii) the foreclosure frequency that results from all other applicable loan characteristics, except loan seasoning and arrears status (see paragraphs 83-86 and paragraphs 117-125). The adjustments for loan seasoning and arrears, where applicable, are made to the resulting default frequency.

Table 9

Adjustment Factors For BKR Registrations

Number of BKR ("Bureau Krediet Registratie") registrations	Multiple
1	1.5x
2	2.0x
3	2.5x
More than 3	3.0x

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

a) Loan repayment types: Interest-only loans

96. The criteria apply a multiple of 1.5x to short-term interest-only (IO) mortgage loans. A short-dated (or short-term) IO loan refers to a nonamortizing bullet loan with a term of less than 10 years, which requires only interest payments during its term.

97. We consider short-term IO loans to carry greater risk than loans with other repayment terms. In these situations, the borrower makes monthly interest payments, with the total principal due at final maturity. The relatively short term of the loan restricts the ability of the borrower to build up capital to repay the loan principal, creating a degree of refinancing risk.

98. Given that interest paid on mortgages is tax-deductible for a period of up to 30 years, nonamortizing products are popular and represent a significant proportion of the Dutch mortgage market, although nonamortizing products represent a lower proportion of new originations since the introduction of changes to the Dutch fiscal regime.

99. The adjustment factor for short-dated IO loans is consistent with the adjustment factor under the U.K. RMBS criteria.

b) Remortgage loans (refinancing mortgage loans)

100. The criteria align adjustment factors for Dutch remortgage loans with corresponding factors for similar loans in the U.K. (see table 10).

Table 10

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 re-underwriting including a revaluation of the property.

101. If a borrower refinances to take advantage of a lower lending rate, and the lender undertakes full re-underwriting procedures, including reappraising the value of the mortgaged property, there is no adjustment (i.e., a neutral adjustment of 1.0x applies; see table 10). Unless clearly evidenced as a refinancing, a loan is treated as a cash-out (i.e., a loan that is used to borrow against the built-up equity in a property).

c) Buy-to-let loans

102. The criteria apply an adjustment factor of 1.7x for buy-to-let loans. This is consistent with the highest adjustment according to the U.K. RMBS criteria. If the servicer is unable to provide loan-level data on this feature, we may increase the originator adjustment to address any additional risk (see paragraphs 126-128).

d) Loan size: Jumbo loans

103. The criteria capture the risk of larger loans through an adjustment factor for jumbo valuations (see paragraphs 129-131). This approach is consistent with the U.K. RMBS criteria. The analysis reviews how underwriters assess loan-size risk, and this forms part of the adjustment related to the lender (see paragraphs 126-128).

e) Payment shock

104. The criteria apply an adjustment factor of 1.2x for mortgage loans exposed to a possible payment shock (other than fixed-reset loans), due to their relevant features such as its interest rate, amortization schedule, or any other characteristic that may create a payment shock to the borrower. Where relevant, the adjustment is removed six months after the end of any expected payment shock.

105. The payment shock adjustment factor does not apply to loans that pay a floating interest rate, as the risk is captured in the adjustment factor of 1.1x for loans that pay a floating interest rate (see paragraphs 107-108).

f) Second-lien mortgage loans

106. The criteria apply an adjustment factor of 1.67x to any second-lien mortgage loans in a pool, which is in line with the adjustment under the U.K. RMBS criteria. 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. We do not apply an adjustment factor when the first and sequentially ranking lien are included in the same transaction, as we aggregate the two liens and treat them as a single loan in the analysis. This approach is the same as that in our RMBS criteria for other jurisdictions.

g) Loan interest types: Floating-rate loans

107. The criteria apply an adjustment of 1.1x to loans that pay a floating interest rate.

108. Historical data show that fixed-rate (and fixed-reset rate) loans perform better than floating-rate loans, especially during periods of rising interest rates.

h) Construction loans

109. The criteria apply an adjustment of 1.2x to loans where part of the mortgage loan can be used for renovation or improvements to a property, with a construction deposit up to 10% of the loan balance.

110. For loans where the construction deposit is above 10% of the loan balance (subject to a maximum of 50% of the loan balance), the criteria apply an adjustment factor of 1.5x.

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

a) Small-pool adjustment

111. For pools that--unlike the archetype--contain fewer than 250 mortgage loans, the criteria apply the small-pool adjustment as described in paragraphs 42 and 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.

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

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

114. Nonetheless, the analysis of a pool focuses on any material concentration in a few loans and may result in a pool-level adjustment (see paragraphs 126-128).

115. A pool may contain a loan that does not allow for an appropriate estimate of potential losses under the 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) Geographic concentration

116. The criteria apply an adjustment factor of 1.1x to portfolio concentrations that exceed the limits set out in table 11. The limits in table 11 reflect the population distribution in the Netherlands.

Table 11

Mortgage Loan Concentration Limits For The Netherlands By Province

Province	Concentration limit (%)
Groningen	7
Friesland	8
Drenthe	6
Overijssel	14
Flevoland	5
Gelderland	24
Utrecht	15
Noord-Holland	32
Zuid-Holland	42
Zeeland	5
Noord-Brabant	29
Limburg	13

c) Arrears analysis

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

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

119. 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.

120. The arrears matrix sets out adjustments that apply to loans in various arrears buckets (see table 12). The adjustments differ according to portfolio-specific considerations (see paragraphs 122-125).

Table 12

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.

121. The arrears matrix in table 12 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. The criteria increase the modeled default frequency by the absolute percentages shown in table 12, after any adjustments stemming from other factors, where relevant (see paragraph 140). This makes the use of the arrears matrix for arrears projection more effective. The arrears adjustment follows the U.K. RMBS criteria.

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

123. 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.

124. The determination of these projections involves analyzing historical performance data from previous transactions of the same originator and of comparable portfolios. An arrears projection may also involve assessing how collection rates compare with actual and projected arrears levels.

125. 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 12 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.

d) Originator adjustment

126. 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 "Mortgage Originator Review Criteria For U.S. RMBS," published April 17, 2012.

127. 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. The criteria assume prudent underwriting of the mortgage loans.

128. If originators or servicers are unable to report loan-level data on certain characteristics that we consider in our analysis, the analysis of the originator and servicer risk includes the assessment of the underwriting policies regarding

such loan and borrower features.

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

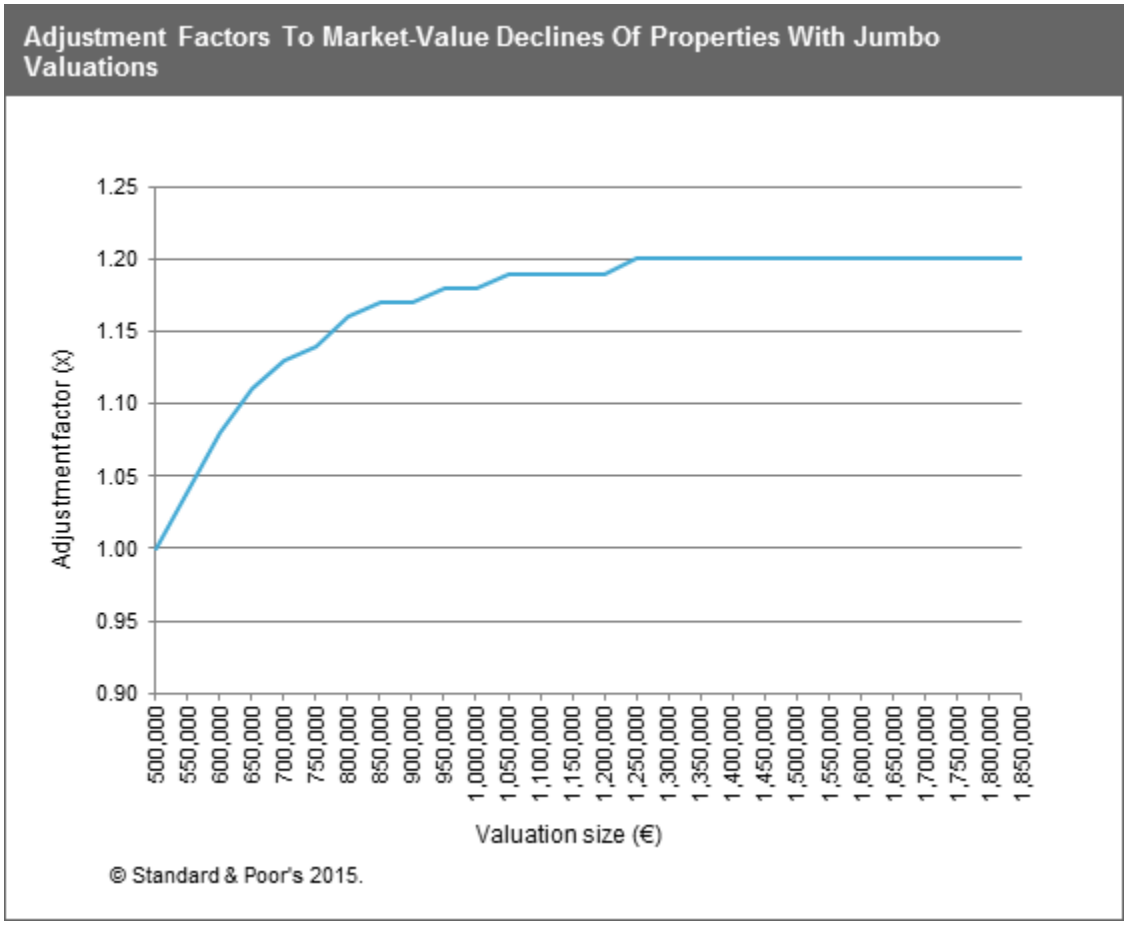
a) Jumbo valuations

129. The criteria apply an adjustment factor for property values that exceed a jumbo valuation limit (i.e., €500,000), 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.

130. The adjustment for jumbo valuations in the modeling results in a higher estimate of the market-value decline on repossessed properties (defined in paragraph 151). The adjustment rises as a function of a jumbo valuation that exceeds the limit described in the preceding paragraph (see chart 3). The maximum adjustment factor is 1.2x.

131. In determining whether a valuation is jumbo, the modeling looks at the fully indexed valuation of the property (see paragraphs 156-165).

Chart 3



b) Valuation haircuts

132. The criteria set a reduction in value (haircut) of up to 5.0% of the original valuation on a property, except if the valuation was a full valuation from a real estate appraiser or an appraisal report of the municipality (tax valuation).

133. 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, depending on the original valuation method (see paragraph 132); and
- The indexed valuation, that is, the haircut original valuation that is fully indexed as of the date when the pool data was extracted from the lender's systems (see paragraphs 156-165).

134. 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) ratio. Where relevant, the OLTV ratio is based on the lower of the purchase price and the original appraisal (see paragraphs 77-81).
- The indexed valuation provides the calculation of repossession market-value declines (see paragraph 151) and a comparison with jumbo valuation limits (see paragraph 129).

c) Construction loans

135. The criteria apply a multiple of 1.15x to the market-value-decline assumptions for loans where the construction deposit is above 10% of the loan balance (subject to a maximum of 50% of the loan balance).

B. Modeling Assumptions

136. The rating assessment of Dutch RMBS includes an analysis of the payment structure and cash flow mechanics.

137. 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 (see "Criteria Methodology Applied To Fees, Expenses, And Indemnifications," published July 12, 2012). Standard & Poor's uses its own credit and cash flow models.

138. This subpart details the modeling assumptions under the criteria. Table 13 below expands on table 4 by providing the breakdown, for modeling purposes, of the projected losses, including components of foreclosure frequency and loss severity, at each rating level, under benign starting conditions.

139. This subpart also details the calculation--at pool level--of foreclosure frequency, market-value decline, and loss severity under the criteria to determine the relevant inputs for modeling the cash flows of an individual Dutch RMBS transaction (see paragraphs 140-165). 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 paragraphs 166-230).

Table 13

Components Of Credit Enhancement For The Archetypical Dutch Pool Under Benign Starting Conditions

At various rating levels (for modeling purposes)

	AAA	AA*	A*	BBB*	BB*	B*
Projected losses (%)	6.7	4.2	2.7	1.6	0.7	0.5

Table 13

Components Of Credit Enhancement For The Archetypical Dutch Pool Under Benign Starting Conditions (cont.)						
Foreclosure frequency (%)§	11.5	7.6	5.7	3.7	1.8	1.3
Loss severity (%)§	58.5	55.0	48.0	43.0	40.0	37.0

*Given a stable or positive outlook. §The foreclosure frequency and loss severity--including foreclosure costs--are the components of loss levels, for modeling purposes, of an archetypical pool in a property market at equilibrium, taking into account foregone loan interest.

140. Where relevant, adjustments apply to the foreclosure frequencies in table 13, 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 as shown in paragraphs 74-135 and in paragraph 43.

141. 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% and assigning any defaulted mortgage loan in a portfolio a foreclosure frequency of 100%. The WAFF at the pool level also has a cap of 100%.

142. 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 13. Paragraphs 129-135 above discuss adjustment factors to the loss severities of nonarchetypical properties.

143. 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.

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

B.1. Loss severity computation

a). General considerations

145. The criteria calculate time-specific loss severities and use a modeling method that allows for the reflection of property price fluctuations during normal housing cycles, but not those resulting from exceptional housing cycles. This approach is consistent with the U.K. RMBS criteria.

146. The modeling approach seeks to reflect any over- 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 average in national property values, especially at higher rating levels.

147. The modeling approach adjusts for inflated or deflated house prices at the time of the property appraisal.

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

149. To achieve the same objective for 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 paragraphs 156-158).

150. 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 Dutch residential properties at the national level, relative to their long-term value (see paragraph 153).

151. The market-value decline of a repossessed property (Repo MVD) derives from the formula below, based on the rating-specific input variables shown in table 14. Absent any over- or undervaluation, the resulting Repo MVD is as shown in the last column in table 14 and is 46% at 'AAA', which is equal to that in the U.K. RMBS criteria.

Table 14

Property Market Adjustments For Calculating Repossession Market-Value Decline Modeling Assumptions

Rating category	Fixed market-value decline (%)	Percentage of overvaluation added (%)	Percentage of undervaluation deducted (%)	Forced-sale discount (%)	Repossession market-value decline, 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

The following pertain to table 14:

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

- Fixed MVD is the fixed recessionary market-value decline shown in the second column of table 14, and
- FSD is the forced-sale discount factor detailed in the fifth column of table 14. 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.

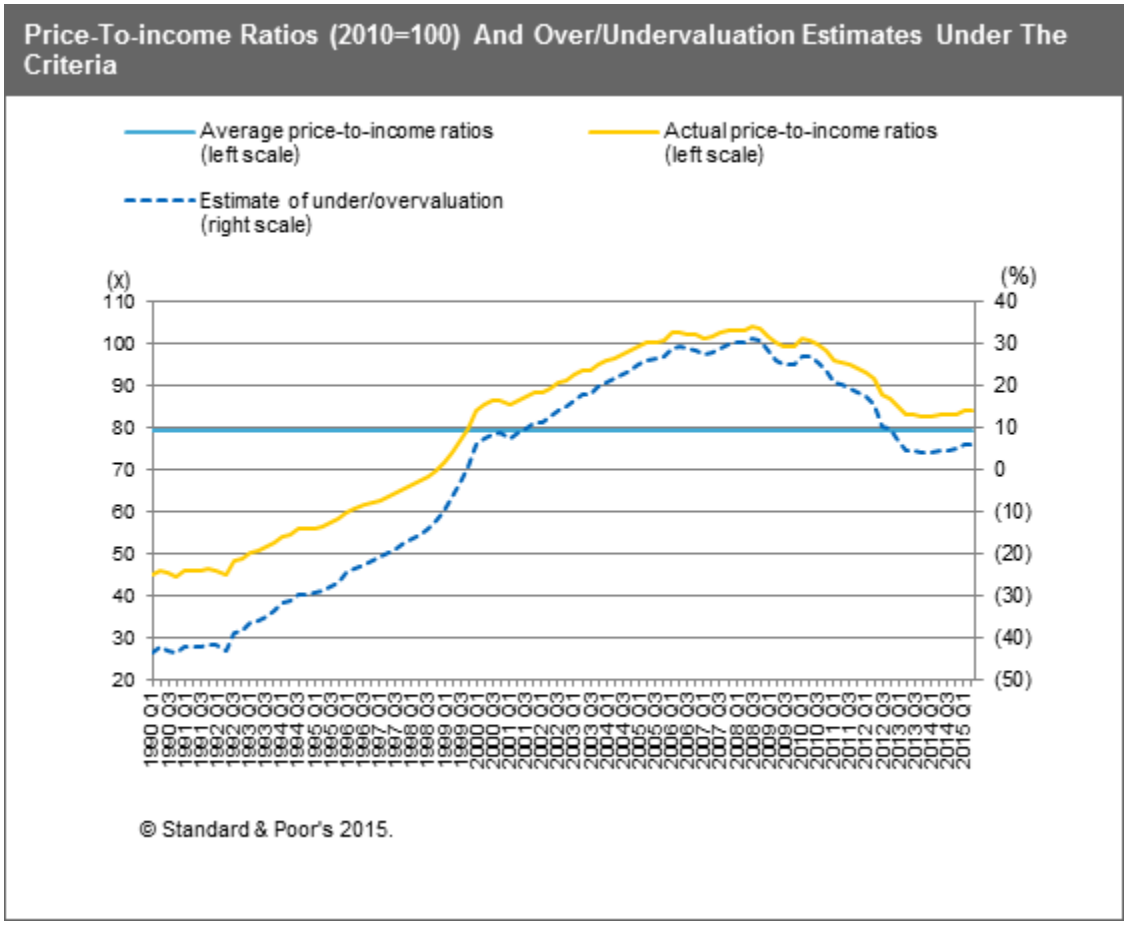
The percentages of over- or undervaluation are in the third and fourth columns of table 14, respectively. Details of the estimation of the level of over- or undervaluation in a property market are in paragraph 153 and paragraphs 156-158.

152. 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.

153. In order to measure the degree of over- or undervaluation in the property market, the criteria use various data sources that are available, including OECD (Organization for Economic Cooperation and Development) data, expert opinions, and independent research. Endogenous and exogenous factors influence changes in property prices, reflecting macroeconomic trends and variable supply and demand. The criteria generally estimate the level of over- or undervaluation of the relevant property market by comparing the prevailing house price-to-income and house price-to-rent ratios (based on data from 1990) against the long-term averages of these ratios. The calculation of over-

or undervaluation in the Dutch housing market therefore uses actual values, divided by average values minus one. Chart 4 illustrates estimates of over- or undervaluation using this method.

Chart 4



154. The Repo MVD has a cap of 75%, and the loss severity of a pool a floor of 2%.

155. Because the percentages in the fourth column of table 14 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 estimate is specific to a particular rating, and it is highest for a 'AAA' rating (see the third column in table 14). This is because a 'AAA' issue rating on RMBS typically reflects greater stability than other ratings, relative to long-term property values.

156. 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 analysis.

157. This determination uses the fully indexed value of each property. Regional house prices come from the region-specific index data that Kadaster publishes for each of the regions within the Netherlands.

158. The next step is to assess the level of over/undervaluation in the prevailing property market at the national level. The criteria, among other information indicators, consider the house price-to-income and house price-to-rent ratios as they are calculated by the OECD.

159. Mortgage loan foreclosure costs are modeled at 4.0% of a loan balance. These costs are included in the loss severity estimates (see table 14).

160. For modeling purposes, if a portfolio uses a mortgage loan insurance guarantee, the global mortgage insurance guarantee criteria apply (see "Methodology For Assessing Mortgage Insurance And Similar Guarantees And Supports In Structured And Public Sector Finance And Covered Bonds," published Dec. 7, 2014).

b). Considerations specific to Nationale Hypotheek Garantie (NHG) loans

161. When rating transactions where we assess the benefit of the guarantee provided under the Nationale Hypotheek Garantie (NHG) program, we consider certain collateral and guarantee risks including the amortization of the guarantee, eligibility at time of underwriting, and eligibility at time of default.

162. The NHG guarantee amortizes over the life of the mortgage loan, while the underlying loan itself may not necessarily amortize as rapidly, which creates a potential shortfall in the level of protection the guarantee provides. The criteria therefore consider the extent of loan seasoning and the timing of defaults when assessing amortization-related guarantee risks.

163. The risk of ineligible loans, at the time of underwriting, or default is captured through a small percentage increase in the loss severity being modeled (after accounting for amortization of the guarantee).

164. After the combined assessment of the three aforementioned risks (amortization of the guarantee, eligibility at time of underwriting, and eligibility at time of default), we verify that the claims success rate we model is appropriate by considering the historical claims success rate of both the originator and comparable peers, as outlined in the global mortgage insurance guarantee criteria (see "Methodology For Assessing Mortgage Insurance And Similar Guarantees And Supports In Structured And Public Sector Finance And Covered Bonds," published Dec. 7, 2014).

165. For NHG mortgage loans originated after Jan. 1, 2014, the originator shares in any losses, and the claims success rate is reduced by 10%.

B.2. Other cash flow assumptions

166. Most Dutch RMBS transactions involve the issuance of notes split into tranches of differing seniority and supported by a first-loss reserve fund.

167. 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.

168. 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.

169. In contrast, the criteria model revolving periods of Dutch RMBS master issuers for reasons specific to their structure (see "Specific cash flow assumptions for master issuer structures," in paragraphs 224-230).

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

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

172. 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).

173. 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-'.

174. 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 (see "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," published Oct. 1, 2012).

175. 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 two components of the credit enhancement level.

176. The following subsections discuss the cash flow assumptions.

a) Defaults, recoveries, and delinquencies

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

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

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

180. The criteria model defaults to occur periodically to match the payment profile of the mortgage loans. The default amounts in table 15 reflect a percentage of the WAFF. The timing of defaults follow 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 15

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

Recession periods (months)	Front-loaded defaults (percentage of WAFF applied in each month)	Back-loaded default (percentage of WAFF applied in each month)
1 - 6	5.0	0.8
6 - 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.

181. To simulate the effects of varying recession timings, the criteria envisage two different starting points for the recession in the first column of table 15: (i) at inception, and (ii) at the end of the third year.

182. The prepayment stresses push the recession timings to the maximum possible future date. This approach still uses the entire WAFF as a percentage of the pool balance as described in paragraphs 178-179.

183. The recovery period for owner-occupied mortgage loans is 18 months. For NHG loans, we typically model an additional delay to account for the time it takes to process the claim, with the recovery period being 24 months.

184. To model the liquidity stress that results from short-term delinquencies, the criteria delay a proportion of scheduled interest and principal receipts equal to one-third of the WAFF. Modeling applies this delay in each month for 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

185. ***1) Interest rate risk:*** Interest rate assumptions apply a range of different interest rate curves, and modeling use 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 modeled in the cash flows only when the forward curve (e.g., the current forward curve for the Euro Interbank Offered Rate; EURIBOR) 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.

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

187. ***2) Basis risk:*** 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.

188. 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.

189. 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 16.

Table 16

Basis Risk Percentile Stresses

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

190. For example, in an RMBS transaction, the underlying mortgage loans may incur interest based on the one-month EURIBOR resetting monthly, but the securities may pay interest based on the three-month EURIBOR. In this case, the analysis looks at the distribution of the historical differences between these two rates, calculated by taking the highest three-month EURIBOR over the previous three-month period and the lowest one-month EURIBOR value for each point in the data set. It then takes the percentiles of the resulting distribution shown in table 16.

191. 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 185-186.

192. However, the basis-risk stress applies for exposures between for instance, one-month EURIBOR and three-month EURIBOR, because basis-risk stress simulates a higher stress than interest rate stresses.

193. 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 16 applies at all rating levels.

194. For an RMBS transaction whose mortgage loan pool contains loans that may revert to an interest rate type 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.

195. Where there are only positive differences between two indices in a data set, the spread is generally zero.

196. ***3) Prepayment scenarios:*** Mortgage loan prepayments vary the amount of excess spread available and may affect the cash flows of an RMBS transaction.

197. The criteria therefore define prepayment stress assumptions (see table 17).

198. The criteria apply the prepayment rates in the second column of table 17 before the start of the hypothetical recession in the modeling, where relevant (see paragraph 181). Prepayment then drops immediately to the recessionary prepayment rate of 1% at the start of the recession (see the third column in table 17).

199. 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 17, 18 months later.

Table 17

Prepayment Stress Assumptions For Dutch RMBS

Rating category	Before recession (if applicable)	During recession (then 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: 24% p.a.	1% p.a.	High: 24% p.a.
	Forecast	1% p.a.	High: 24% p.a.
Additional scenario for 'AAA', 'AA+', and 'AA' ratings	Low: 1% p.a.	1% p.a.	Low: 1% p.a.

p.a.--Per annum.

200. Historical data show that prepayment rates tend to be lower in the Netherlands than in the U.K., a reflection of the refinancing nature of the U.K. mortgage market. The prepayment patterns are similar to those in the U.K. RMBS criteria, but the absolute values are lower to reflect the lower prepayment rates.

201. The forecast prepayment rate in table 17 aims to reflect relatively short-term expectations and the prevailing prepayment rate, to the extent that this rate is stable.

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

203. 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.

204. 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 post-recession prepayments as an additional scenario.

205. Adjustments to the prepayment assumptions in table 17 could be necessary if a pool's historical prepayment rates were higher or if a transaction were particularly sensitive to prepayment risk (for example, excess-spread notes).

206. ***4) Reinvestment rates:*** The criteria apply various reinvestment rate assumptions and a floor to the reinvestment rate of 0.0% (see table 18).

Table 18

Reinvestment Rate Assumptions

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

Note: The term "contractual margin" refers to the actual margin of, for instance, a GIC (guaranteed investment contract) in an initial transaction structure. EURIBOR--Euro Interbank Offered Rate.

207. 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

208. 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 Risk Framework Methodology And Assumptions," published June 25, 2013); (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).

209. 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 RMBS issuer.

210. 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.

211. Under Dutch law, the insolvency of the account holder would most likely result in a loss of funds deposited in the account.

212. If the loan originator (or servicer) is also a deposit-taking institution, modeling takes into consideration the possibility that borrowers with deposit accounts may set off these amounts against their outstanding mortgage loans, regardless of their legal right to do so. An estimate of the set-off exposure derives from looking at historical deposit account balances of mortgagees on the books of the originator and taking the peak of these balances.

213. The modeling approach 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.

214. Other criteria apply to certain set-off risks that are specific to the Dutch mortgage market and are not addressed by these criteria (see "Changes To The Treatment Of Potential Set-Off Risk In The Dutch RMBS Market," published Sept. 8, 2006).

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

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

216. 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 for prime mortgage loans at the higher of twice the contractual rate and 35 basis points (bps), and for nonconforming mortgage loans at the higher of twice the contractual rate and 50 bps.

217. The loss severity calculation includes mortgage loan foreclosure costs as an input for cash flow modeling (see paragraph 159). 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.

218. 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.

219. Modeling also 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.

220. Modeling assumes that the facility is fully drawn 60 days after the start of the analysis (the remedy period for a direct support obligation under "Counterparty Risk Framework Methodology And Assumptions," published June 25, 2013).

221. 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.

222. Modeling also provides estimates of the possibility that the spread on the loan pool compresses over time, due to defaults, prepayments, and product switches. For this reason, modeling includes reduced margins calculated assuming that a percentage of the higher-yielding loans exit the portfolio.

223. 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 issuer structures

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

225. ***Credit testing:*** 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. However, in a master issuer 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 trigger event and modeling incorporates more or less stress, depending on individual transaction circumstances. Consequently, further modeling of the cash flows includes more combinations of possible scenarios in a master issuer structure.

226. At the point that the originator becomes insolvent, the substitution and sale of new mortgage loans to the asset purchaser cease. The master issuer then enters into an early amortization period and all of the notes become amortizing or "pass-through" notes. If the originator remains solvent, then substitutions would continue to occur and the mortgage loan pool will continue to revolve.

227. 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 181 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. Among other things, these additional runs will result in modeling various spread-compression scenarios (see paragraph 222-223).

228. ***Liquidity testing:*** In the event that a series of notes have an earlier legal final maturity date than other series issued from a master issuer, for example, because they have set bullet-payment schedules, the nonpayment of these series by their legal final maturity would constitute a default. To test the timely repayment of these notes, 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.

229. ***Recessionary-timing testing:*** The liabilities of master issuer structures can have different legal final maturity dates. If junior notes mature earlier than more-senior notes, the senior notes might have insufficient subordination at the point of the junior notes' redemption. To assess this risk, the criteria adjust the starting points of the recession to test whether, on redemption of junior notes, sufficient enhancement is available to absorb losses, and the more senior notes are still able to pay noteholders in a timely manner.

230. The timing of each recession period therefore varies at yearly intervals, depending on the capital structure of the master issuer. For example, the recession could start immediately, as well as at the end of years one, two, three, four, five, six, seven, and eight. During each 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 181, but only for master issuer structures.

RELATED CRITERIA AND RESEARCH

Related criteria

- Revised Assumptions For Rating U.S. RMBS Prime, Alternative-A, And Subprime Loans Incorporated Into LEVELS Version 7.4.3, June 1, 2015
- Methodology And Assumptions For Rating Japanese RMBS, Dec. 19, 2014
- Methodology For Assessing Mortgage Insurance And Similar Guarantees And Supports In Structured And Public Sector Finance And Covered Bonds, Dec. 7, 2014
- Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
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- Europe Asset Isolation And Special-Purpose Entity Criteria--Structured Finance, Sept. 13, 2013
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- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
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- Assessing The NHG Guarantee In Dutch RMBS Transactions—A Prudent Approach, June 11, 2008
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Related research

- Outlook Assumptions For The U.K. Residential Mortgage Market, June 29, 2015
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- Standard & Poor's To Explicitly Recognize Credit Stability As A Rating Factor, Oct. 15, 2008
- Rating Review Triggers Facilitate Surveillance Of European RMBS Securitizations, June 19, 2007

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.