

RMBS / UK  
Presale Report

## Paragon Mortgages (No. 4) PLC

### Ratings\*

Class	Amount (million)	Final maturity	Rating	CE (%)
A	GBP457.5	2032	AAA	10.25
B	GBP42.5	2044	A	1.75

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\*Preliminary ratings do not reflect final ratings and are based on information provided by issuers as of 31 December 2001.

### ■ Summary

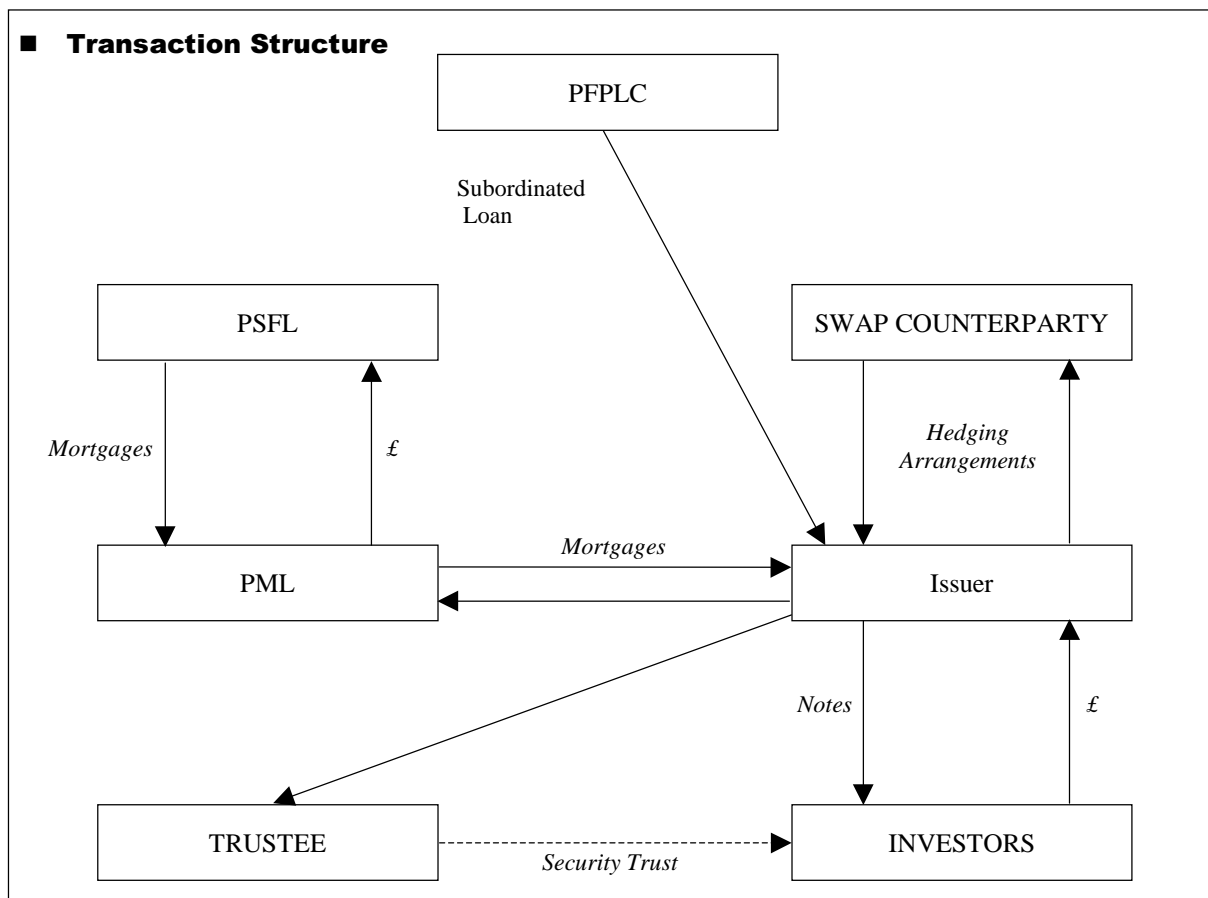
This GBP500 million transaction is a securitisation of residential mortgages originated in the UK. Fitch Ratings ("Fitch") has assigned expected ratings to the notes to be issued by Paragon Mortgages (No. 4) PLC (the "issuer") as indicated at left.

The expected ratings are based on the quality of the collateral, available credit enhancement, the underwriting processes of Paragon Mortgages Limited ("PML"), the servicing capabilities of Paragon Finance PLC ("PFPLC") (both of which are wholly-owned subsidiaries of The Paragon Group of Companies ("the Group")) and Global Home Loans Limited ("GHLL") and the sound legal structure of the transaction. Credit enhancement for the class A notes will be provided by the subordination of the class B notes and a fully-funded reserve fund of 1.75%.

In the context of residential lending, PML specialises almost entirely in the origination of buy-to-let loans to "professional" landlords. In order to qualify as such, a borrower must be able to demonstrate an aptitude in letting a portfolio of properties for a minimum period of time, and has to provide at least 12 months' of financial accounts to support the loan application. The vast majority of loans in the reference portfolio are secured on investment properties belonging to such borrowers.

The Group offers an array of financial products, ranging from personal and auto loans to prime residential mortgages, and has executed a number of securitisation transactions in these various asset classes, of which residential mortgages has been the staple. This deal represents the Group's fourth deal from the PML platform, and its 37<sup>th</sup> public securitisation transaction in total.

The Group was formed in the wake of the collapse and subsequent rescue of National Home Loans ("NHL"), a centralised mortgage lender which advanced home loans in the late 1980s and early 1990s. With the sharp hike in interest rates and a concurrent drop in house prices in the early 1990s, NHL suffered rising arrears and increasing losses on its mortgage loan book; a withdrawal of local authority deposits from its subsidiary, National Mortgage Bank, threatened NHL with insolvency. Following intervention by the Bank of England, NHL was salvaged and evolved into the Paragon Group of Companies. In 1994, the Group began to extend new credit under tightened mortgage underwriting policies and procedures, using the "Paragon" branding. The Group does not lend to the so-called subprime sector, and lending decisions are based on a credit analysis model more in line with other prime lenders, albeit one specialising in niche non-conforming products, such as buy-to-let mortgages.



■ **Credit Committee Highlights**

- The majority of the reference portfolio (84.3% by current balance) consists of buy-to-let loans. Fitch believes that, *ceteris paribus*, an investment property borrower would be more likely to default on a mortgage obligation in a downturn than a borrower whose loan is secured on his or her home. However, most of these borrowers are considered “professional” landlords, with a proven history of maintaining a portfolio of investment properties.
- There is a degree of “granularity” owing to clusters of properties in certain districts favoured by professional landlords.
- It is possible that a single “professional” borrower could accumulate upwards of twenty mortgage loans from PML, each backed by a property and a corresponding stream of rental income. While this represents an increased exposure to a single obligor, the normal evolution of an investment portfolio over time means that all its constituent loans are unlikely to find themselves in a single securitisation issue. Furthermore, PML has had some historical success in setting off delinquencies on one loan with surplus income generated by properties within the same investment portfolio.

■ **Credit Structure**

The financial structure of the transaction is designed to provide differing degrees of credit enhancement to the two note tranches. The class A notes are protected firstly, by any excess spread; secondly, by the reserve fund; and thirdly by the subordination of the junior tranche. The class B tranche is supported firstly, by any excess spread; and secondly, by the reserve fund. Any residual excess spread is used to replenish the reserve fund to its required amount on every payment date before the remainder returns to the originator. No earlier than April 2007, this required amount will be reduced to the greater of GBP0.5 million and 3.5% of the outstanding balance of the loans, subject to various performance triggers mentioned below.

The reserve fund is also available to cover interest shortfalls. Were there still to be an interest shortfall arising on the class A notes on any payment date, principal receipts would be reapplied to cover this deficit, subject to conditions.

To the extent that losses are realised on the loans and/or principal receipts are reapplied to meet senior interest shortfalls in an interest payment period, the PDL is debited by that amount. Such a debit balance is reduced (wherever possible to zero) at its position

## Key Information

### Provisional pool characteristics

Total Amount: approx GBP339.6 million

WA Current LTV: 75.5%

WA Original LTV: 76.8%

WA Initial Interest Rate: 6.15%

WA Remaining Maturity: 232.1 months

WA Seasoning: 19.6 months

### Structure

Originator: Paragon Mortgages Limited

Mortgage Administrator: Paragon Finance PLC

Standby Mortgage Administrator: Global Home Loans Limited

Swap Counterparty: JPMorgan Chase Bank, rated 'AA/F1+' by Fitch Ratings

Transaction Account Bank: National Westminster Bank plc rated 'AA-/F1+' by Fitch Ratings

in the revenue priority of payments using applicable revenue (including any drawing on the reserve fund). All amounts credited to the PDL are applied to the principal priority of payments, and used to pay down the more senior notes outstanding. Should a PDL debit balance fail to be extinguished at inception, it is carried forward to subsequent payment dates until it can be fully cleared.

For a diagram of the structure, please see Transaction Structure on page 2.

### Revenue Priority of Payments

Amounts standing to the credit of the revenue ledger will on each payment date be applied to the revenue priority of payments. This includes all interest payments made by borrowers within a payment period, interest earned on short-term investments, and any amounts standing to the credit of the reserve fund.

On each quarterly interest payment date, such amounts will be applied as follows:

1. Trustee and substitute servicing fees.
2. Servicer fees.
3. *Pro rata*, amounts due and payable (i) under the swap agreement and (ii) as interest to the class A noteholders.
4. Interest due and payable on the class B notes.
5. Amounts of VAT to be paid in respect of the issuer, if any.

6. Amounts applied in extinguishing a debit balance on the principal deficiency ledger ("PDL") recorded in respect of realised losses.
7. Amounts required to replenish the reserve fund.
8. Other subordinated amounts, including a provision for a reserve to fund any purchase of caps or other hedging instruments in the next period.

Should the debit balance recorded on the PDL exceed the balance of outstanding class B notes, items (3) and (4) will be relegated below item (5). This ensures that any PDL debit balance corresponding to the class A notes will be reduced to zero prior to the payment of interest on class B notes.

### Principal Redemption

**Mandatory:** In addition to the loss provisioning mechanism described above, the notes are retired in accordance with the rate of amortisation of the loans. With the exception of further advances to borrowers, all principal payments received from borrowers during a single payment period (including scheduled repayments, prepayments and previously delinquent principal) together with sale proceeds from defaulted loans and prefunding amounts are held in the transaction account at National Westminster Bank plc (along with amounts standing to the credit of the revenue ledger). For the duration of the payment period, such amounts are used to purchase investments whose eligibility depends on having both or either of a suitable long-term rating (AAA) and short-term rating (F1), as well as a maturity before the next payment date.]

On the subsequent payment date – and other than in respect of senior interest shortfalls not covered by revenue funds or further advances extended during the previous period – principal receipts are passed through to noteholders. Amortisation of note principal will initially occur in a sequential fashion, such that class B noteholders will not receive back any principal amounts while there are class A notes outstanding. However, provided:

- The balance of junior notes as a proportion of the total outstanding balance of notes exceeds two times that at closing,
  - it is after April 2007,
  - there is no debit balance on the PDL,
  - the balance of loans in arrears for over three months is less than 7.5% of the then current balance, and
  - the outstanding balance of class B notes is greater than GBP23.5 million,
- amortisation will take place *pro rata* according to the outstanding balances of the two tranches.

**Optional:** At the option of the cash/bond administrator, on behalf of the issuer, it is possible to redeem all (but not some only) of the class A and B notes at their respective outstanding principal amounts plus accrued interest, but only in the following circumstances:

- On or after the interest payment date in April 2005,
- If the then current outstanding principal amount is less than GBP85 million,
- If the issuer is required to make any withholding tax deductions.

Fitch's ratings do not address the possible exercising of these call options held by the issuer.

**Final:** To the extent not previously paid down, the class A and B notes are due to be redeemed in full in July 2032 and July 2044 respectively.

### Interest Rate and Basis Risk

At closing, 33.1% of loans will have a fixed rate of interest for a specified period lasting until the latest January 2012. While only few of these will remain fixed rate loan after 2003, the possibility of prefunded fixed rate mortgages being assigned and/or variable rates subsequently being converted into fixed rates may account for a higher number of fixed rate loans remaining or emerging in the portfolio after this date.

In order to hedge its exposure to fixed rate loans in a rising LIBOR situation, the issuer will enter into a master interest rate exchange agreement with JPMorgan Chase Bank. Any increase in this exposure will be accompanied by a suitable extension of the hedging arrangements, funded from excess spread trapped in a subordinated position in the revenue priority of payments on the previous payment date.

Since interest payment dates tend to be set by convention, and as a result, may not coincide with mortgage interest reset dates, some transactions contain a residue of interest rate basis risk. In this deal, there is an interval of 7 days between the reset date of three month mortgage LIBOR and the interest payment date (when three month note LIBOR is set). If three month LIBOR increases during this period, excess spread will be duly compressed.

31.4% of the portfolio is charged against PML's standard variable rate. There is no guarantee that this basis will not reduce in relation to three month LIBOR, thus compressing the weighted average margin on the loans. Fitch acknowledges that PFPLC

have pledged to maintain a weighted average contractual margin over three month LIBOR on the reference portfolio as a whole of at least 1.6%, rising to 2% after April 2008; however, no reliance has been placed by Fitch upon the enforceability of such a mechanism.

### Reserve Fund and Excess Spread

The issuer is initially endowed with a reserve fund of GBP8.75 million (1.75% of the initial note balance), entirely funded from a subordinated loan advanced by PFPLC. However, provided that:

- it is after April 2007,
- there is no debit balance on the PDL, and
- the balance of loans in arrears for over three months is less than 6% of the then current balance,

the required amount will reduce to the greater of GBP0.5 million, 3.5% of the then current balance of the loans, and two times the current balance of the largest mortgage in the reference portfolio.

The balance standing to the credit of the reserve fund forms part of available revenue funds to be applied on each interest payment date to the revenue priority of payments. Whenever the reserve fund is not at its required amount, it is replenished using any available income at its position in the revenue priority of payments. This fund has been sized by Fitch to ensure the notes have sufficient credit protection and liquidity support to merit their respective ratings.

Excess spread is also a source of credit support and liquidity for the notes on each payment date, with the advantage of being a potentially ongoing resource. However, unlike "hard" cash collateral, excess spread is dependent on the performance of the pool, and as such is often less available when it is most needed. It is eroded by delinquencies and defaulted loans, an effect that is compounded if higher margin loans are affected. Should high margin loans repay more quickly than those with lower margins (whether as a consequence of divergent rates of prepayment or shorter tenors), then there is further compression of excess spread. Furthermore, high rates of prepayment of the portfolio as a whole would squeeze the gross amount of excess spread available over the course of the transaction.

In order to take account of these factors in its cash flow modeling, Fitch has applied its performance assumptions (derived from the collateral model) in conjunction with stressed rates of prepayment of loans in order to stress margins received over time.

### ■ Collateral Credit Analysis

The provisional pool analysed consists of prime residential mortgage loans with a total outstanding balance of approximately GBP339.6 million (as of 31 December 2001). Below are highlighted the distinguishing characteristics of the portfolio, with commentary on any special considerations.

#### Buy to Let

Approximately 84.3% of the portfolio are buy-to-let loans, which Fitch considers to be more likely to default for two reasons. Firstly, the borrower is not dependent on the underlying property for a place to live, and as such may be less deterred from defaulting. Secondly, in order to service the loans, the borrower may depend on rental income, which Fitch assumes to be more vulnerable to erosion than other sources, due to its dependence on the housing cycle.

However, Fitch notes that while the minimum debt service coverage ratio is 120%, in the vast majority of cases it is over 130%, with more than half over 150%. This would suggest a degree of borrower insulation from a downswing in the housing market. Fitch notes too that the majority of borrowers in this bracket are “professional” landlords, with a minimum of 12 months’ experience of managing at least three properties, and with a recognised aptitude in enforcing tenancy contracts. This is a mitigant in minimising any downtime between tenancies. Another mitigating feature of buy-to-let loans in general is that upon default, the foreclosure process is likely to be shorter, as tenants with short-term tenancy agreements can generally be more easily evicted than owner-occupiers. *For more detailed commentary, please refer to Origination on page 6.*

#### Shared Ownership Mortgages

This type of mortgage, representing a mere 1.6% of the reference portfolio, is secured on a share in a property, the remaining equity of which is retained by the housing association (“HA”), as landlord, to whom the borrower pays rent. PML accepts applications from selected intermediaries and in respect of HAs whose obligations to its creditors are guaranteed by the state-supported Housing Corporation.

While this product might entail a somewhat different foreclosure process were PFPLC to try to dispose of the issuer’s share, it is expected that, upon borrower default, the relevant HA would wish to take back full ownership of the property in order to carry on its business. However, it is conceivable that under certain circumstances, the HA might obstruct a free sale of the shared estate, preferring instead to nominate a purchaser.

#### Repayment Type

Borrowers with repayment mortgages account for 36.6% of the portfolio. The remainder of the pool is composed of interest-only mortgages, which Fitch believes are more susceptible to default at maturity caused by the borrower experiencing a payment shock and being unable to refinance his loan. This reasoning is unaffected by the existence of any repayment vehicle.

#### Arrears Loans

In the provisional pool, 0.74% of loans by current balance are currently late in making any payments, of which 0.25% are over three months in arrears. Fitch assumes that loans in arrears are more likely eventually to go into default, and applies more conservative default adjustments the further behind the borrower is in making payments.

#### Interest Rate Type

33.1% of loans by current balance are charged with fixed rates of interest for a pre-specified period of time, after which they revert to being charged with a variable rate. All the fixed rate loans in the provisional pool will have reverted at the latest by January 2012. While this may lead to a minor payment shock, Fitch does not believe this warrants any special adjustment to default probabilities. Other than a tiny proportion of capped rate loans, the remainder of the loans in the pool have rates of interest that are linked either to LIBOR or to PML’s standard variable rate.

The ratio of fixed to variable rate loans may change not only as a result of periods expiring, but also following the assignment of prefunded loans and/or the approval of borrowers’ requests to convert their mortgages. Both these possibilities are described in more detail below.

#### Prefunding

The issuer has the right to purchase up to approximately GBP85 million worth of further mortgages up to and including the first principal payment date with funds established at closing, provided the loans conform to standard eligibility tests, including the receipt of 100% of the first payment. On the first interest payment date, if any prefunding amounts remain and have not been used to purchase loans, they will be used to pay down the class A notes.

PML warrants that all of the further mortgages will have received their first payment at the time they are assigned to the issuer, i.e. that none of the loans in the reference portfolio are, or will be, classified as “non-verified”.

Fitch notes that there is a minor element of “negative drag” owing to the holding of cash in the prefunding reserve for up to a quarter.

## Conversion

Subject to certain conditions, borrowers may have requests to convert certain aspects of their mortgages approved. In the example that permission be granted to change a variable rate loan into a fixed or capped rate loan, the issuer would have had to obtain the necessary cash in advance in order that it would be in a position to extend the then current hedging facilities. This would be achieved either by obtaining a loan from PFPLC, whose subsequent claim would be in a subordinated position in the revenue waterfall, or else by trapping excess spread in advance.

## Further Advances

Certain borrowers in the pool have the right to obtain a further advance upon the completion of construction works or refurbishment to their properties. Other further advances may be agreed and advanced to borrowers in the pool by, and at the discretion of, the administrator (acting on behalf of the issuer) using principal receipts or recoveries, provided that:

- there was no debit balance on the PDL as at the previous interest payment date,
- the aggregate of (i) the issuer’s maximum potential obligation – at closing – to fund mandatory further advances, and (ii) the balance of discretionary further advances made or being considered, is no greater than GBP70 million,
- the reserve fund is at its required amount,
- in respect of discretionary further advances, the borrower has not been in arrears in the previous three months, and
- the weighted average current loan-to-value of the portfolio would not exceed its value at closing by more than 1%.

## ■ Origination and Servicing

Fitch visited the sites of PML’s origination and PFPLC’s servicing facilities and met with senior staff in order to perform a review of the capabilities of each entity in its respective role.

## Origination

PML is a subsidiary of The Paragon Group of Companies, a group specialising in the provision of various financial products to consumers. As a mortgage company, PML specialises in the origination of buy-to-let products, and since February 2001, over 80% of originations have been to so-called “professional” borrowers. In order to

qualify for the benefits of such a loan – notably a higher LTV – a borrower must already possess a portfolio of at least 3 properties and must present at least 12 months’ of financial accounts for the underwriters to scrutinise. These professional borrowers are typically characterised as individuals who earn a substantial portion of their income from the rental yield on their portfolio; indeed, some may rely entirely on this source of income for their livelihood. PML insists that expected rental yields must exceed 120%, and ordinarily 130%, of the mortgage repayments on an interest only basis with rates stressed to 8%.

Underwriting at PML is based on a hierarchy of mandates, according to which the 5 underwriting levels are restricted. Crucially for this product are the limits in terms of aggregate lending to a single borrower, despite the diversification of rental income sources; in order to increase borrowing beyond these limits, the application must be taken to a higher level, at which stage it may be processed in the light of additional information, such as a business plan or interview, and in conjunction with performance data. Large exposures in excess of GBP 2million are monitored via an annual review of accounts, letting conditions, voids, demand, cash flows, as well as a consideration of the borrower’s strategy for the next 12 months. These controls are designed to ensure PML are kept abreast of the performance of key borrowers’ portfolios, and may mitigate against concentration on single obligors within the reference portfolio.

As with other buy-to-let lenders, PML are keen to retain human discretion in their lending procedures rather than adhere to a *pro forma* approach, and, as such, a hierarchy of mandates bound to guidelines and criteria ensures that accountability is maintained at its appropriate position. At the summit of policy-making is the overarching credit committee – composed of 4 standing members, department heads and other experts – which convenes on a monthly basis and which presides over any changes to criteria and any special cases. Voting by department heads is restricted to all departments other than their own jurisdiction, a segregation of duties that helps prevent “relationship-lending” factors influencing credit decisions.

Professional landlords are reputedly more adept at managing a portfolio of properties, monitoring and acting on economic conditions and market indicators, reducing downtimes between tenancies, and selecting tenant types and target locations than standard borrowers. This assertion is based on the time and energy that devoted landlords are able to spend administering their portfolio and researching

the market. PML reported that the student sector was a significant source of tenants for its borrowers, which does represent a degree of concentration risk for investors.

## **Servicing**

PFPLC is responsible for administering the mortgage loans in the reference portfolio. PFPLC invested in sophisticated collections technology following the adverse credit experience suffered by the Group in the early 1990s. In a self-contained site at the Group's West Midlands base, ongoing contact with borrowers is maintained via a telephone-based debt management system known as CACS. CACS enables collection agents to schedule calls to borrowers upon a missed payment and provides a detailed diary-based collections management platform. Fitch notes that this site has substantial operational history, and considers PFPLC to be more than adequate in its role as servicer.

GHLL, a subsidiary of the US company Countrywide Credit Industries, Inc., and the largest third-party servicer in the UK with over GBP 32 billion of loans in administration, has been appointed as backup servicer. Fitch is comfortable with this arrangement.

## **■ Representations and Warranties**

The mortgage sale agreement contains representations and warranties given by the originator in relation to the pool of mortgages. No search of title will be conducted by the issuer or the trustee, rather they will rely on such representations and warranties. If there is an unremediable breach of any of the representations or warranties, the seller will be required to repurchase the loan(s) in question.

Specifically, the representations and warranties include the following:

- Each mortgage constitutes a first ranking legal mortgage, which is a valid and binding

obligation of the borrower, enforceable under its terms.

- No lien or right of set-off exists between the borrower and the originator.
- Each loan has been underwritten according to the originator's lending criteria outlined in the offering circular. This includes proper investigation and search of the relevant properties.
- Prior to granting the loan, a property valuation was conducted by an independent valuer from the panel of valuers appointed by the originator.
- Each loan governed by the Consumer Credit Act 1974 meets the requirements of the Act in full.
- The maximum aggregate principal amount of Arrears Mortgages which may be purchased as at the date of purchase is GBP6 million.
- At its date of completion, each property was insured under a buildings policy or a block buildings policy.
- No loan has a final maturity greater than two years prior to the final maturity of the class B notes.
- All loans were originated by PML.
- All loans have – or in respect of prefunded loans, will have – received their first payment instalment.

## **■ Surveillance**

Fitch will monitor the transaction on a regular basis and as warranted by events. Fitch's structured finance surveillance team ensures that the assigned ratings remain, in Fitch's view, an appropriate reflection of the issued notes' credit risk.

Details of the transaction's performance are available to subscribers at [www.fitchresearch.com](http://www.fitchresearch.com). Further information on this service is accessible at [www.fitchratings.com](http://www.fitchratings.com).

Please call the Fitch analysts mentioned on the first page of this report for any queries regarding the initial analysis or the ongoing surveillance.

## ■ Appendix 1 – Rating Methodology

### ■ Model Approach

To determine loss coverage for RMBS, Fitch's default model employs a loan-by-loan review, examining several loan-, borrower-, lender- and property-specific factors that most influence default probability and loss severity. Fitch's base default probability analysis focuses primarily on the borrower's income multiple, in conjunction with the loan's LTV. These expected default rates are then adjusted further by loan, borrower, lender and property attributes. A large component of Fitch's loss severity analysis is market value trends. Fitch's market value assumptions focus on historical regional volatility and sustainable growth. Market value projections are then adjusted by loan and property attributes.

### Default Probability Adjustments

**Underwriting and Servicing Quality:** When applying the default probability matrix, Fitch also considers a lender's underwriting and servicing guidelines. Fitch's views will be formed following a due diligence visit, where the lender's criteria and procedures regarding borrower income, LTV, borrower's past credit performance and many other factors will be considered. Fitch's review and analysis of the originator determines whether it decreases base default rates by up to 25% or increases them by up to 250%.

**Investment Properties:** Fitch's methodology in evaluating the default probability of a Buy-to-let (BTL) portfolio is to use the UK residential default model, but with the following additional assumptions:

- For the base probability of default, BTL loans are assigned an affordability class based on underwriting criteria related to the minimum interest cover requirement. Generally speaking, Fitch will assign a high affordability class (meaning less affordable and thus a higher base probability of default) unless rental yields are estimated to exceed 150% of the mortgage payment, including principal, and are tested at a stressed interest rate.
- A loan-by-loan increase in base default probabilities by 25% for the fact that the properties are non-owner occupied.
- Increase in the underwriting quality factor to account for lack of experience in BTL. This factor also incorporates originator-specific issues related to underwriting criteria, historical experience as well as servicing capabilities.

**Repayment Types:** The most common repayment types in the UK market are repayment and interest-only mortgages. Interest-only mortgages are usually linked to some form of investment vehicle: either an endowment policy, a pension or Individual Savings Account (ISA) which are designed to repay the loan principal on maturity. The following factors should be noted:

- Repayment mortgages incur no default probability adjustment.
- Interest-only mortgages are susceptible to the payment shock associated with a 'balloon' repayment for the entire principal at maturity. The borrower may be able to remortgage and thereby pay off his existing mortgage; however if his circumstances have changed this may not be possible. The further off the maturity date is, the more there is capacity for the borrower's circumstances to change. For this reason, Fitch applies an increased default factor to interest only loans of between 1.1-1.33 depending upon the length of time to maturity.

**Loan Purpose:** Fitch does not penalise mortgage loans advanced to purchase a home or those advanced to refinance existing mortgage loans, nor loans to release equity for the purpose of home improvements. However, Fitch views mortgage loans advanced to release equity in the home (equity refinance mortgages) in order to consolidate other existing debts (such as credit cards) as more risky by their nature. For this reason, Fitch applies an increased default factor of 1.1-1.25 depending on underwriting criteria for such loans.

**Mortgages in Arrears:** When rating a portfolio combining current and arrears mortgages, Fitch increases base default rates for mortgages in arrears up to 90 days by factors between 1.25 and 1.75. For mortgages that are in arrears for more than 90 days, Fitch assumes a 100% default probability.

**Second Homes:** While information about mortgage performance for second homes is limited, Fitch believes that second homes are considerably more susceptible to default. A financially distressed borrower is more likely to default on a second home than on his primary residence. Accordingly, Fitch increases base default by a factor of 1.1-1.25.



**Right to Buy:** Council tenants have the opportunity to purchase their own homes through the UK government's Right to Buy scheme. Available information suggests that there is a higher propensity to default. For this reason Fitch applies and increases default probability factor of between 1.1-1.25.

**Product Type:** Most UK RMBS issues are primarily backed by variable rate mortgages. While variable-rate mortgages can experience payment shock due to underlying index volatility, this risk is usually gradual with ½-1% interest rate rises. Other mortgage types commonly available include initially fixed-rate mortgages and capped-rate mortgages which reset to variable rate after a limited period. Although these loans may be more susceptible to payment shocks after the reset date (if rates have risen substantially during the fixed- or capped- rate period) Fitch believes this does not warrant a supplementary default factor. Other product types will be evaluated individually.

#### **Loss Severity**

Fitch's UK default model quantifies loss severity (or, conversely, recovery value) by focusing on several factors, including market value declines, foreclosure and carrying costs, and LTV.

**Market Value Declines:** Fitch's MVD methodology focuses on three key factors: volatility of observed prices from the long-term trend; historical levels of stress experienced in the housing market of each region; and the current position of the index relative to the long-term trend.

For example, the MVDs for East Anglia, London and the South East are highest, reflecting high historical volatility and current prices well above the long-term trend line. The MVD for Scotland is lowest, reflecting low historical volatility and current prices slightly below the long-term trend line.

**Indexing of Property Valuation:** Fitch's model uses a conservative index to adjust original property values depending on the year of valuation. The index is based on information obtained from sources in the mortgage industry and considers both the year of valuation and the region in which the property is located. Where there has been capital appreciation this is a mitigating factor in the calculation of loss severity but will be offset by higher MVDs assigned to regions that have seen above average price appreciation.

**High- and Low-Value Properties:** Homes with relatively high or relatively low market values are generally subject to higher MVDs in a deteriorating market than homes with average market values due to limited demand for such properties. Imprecise pricing information, caused by the lack of comparable benchmark homes in the case of high-value properties, also influences the amount of price volatility during a market downturn. The market value thresholds are increased periodically to reflect the increase in housing prices. Adjustments for high- and low-value properties are split between London and the rest of the country due to higher prices in London, and the differential between what would constitute a high- or low-value property.

**Mortgage Indemnity Guarantee (MIG) Policies:** Many lenders require borrowers to pay for MIG for that portion of their mortgage loan which exceeds a certain LTV level (usually 75%). In case of default by the borrower, the lender will be able to recover any loss on the portion of the loan in excess of that LTV limit (subject to any policy deductions) from the MIG provider. Fitch will give credit for MIG on a case-by-case basis. Fitch will review the MIG policies to determine the extent of coverage and payment terms and to determine whether there are any exclusion clauses which might lead to non-payment of claims by the insurer. The insurer's rating is also taken into consideration when determining the amount of credit to be given for MIG.

**Geographic Concentration:** Fitch also assumes that a mortgage portfolio is generally broadly diversified in geographical terms. A particular region might be more sensitive to economic downturns and/or other negative developments in the property and mortgages market than others. If a portfolio has significant regional concentrations, Fitch will make adjustments on a case-by-case basis. As a general rule, for pools with high concentrations in specific regions, credit enhancement necessary for a particular rating level will be higher than for geographically diversified portfolios.

**Foreclosure and Carrying Costs:** When calculating recovery value, Fitch's model reduces the property valuation by foreclosure costs and the cost to the administrator of "carrying" the loan from delinquency through to default. Fitch assumes foreclosure costs amount to 5% of the sale price at the time of foreclosure. This estimate is based on actual cost data supplied to Fitch, and may be adjusted as cost structures change in the industry and jurisdiction.

To calculate carrying costs, Fitch assumes the borrower does not pay interest for 18 months in the case of a residential property and 12 month in the case of an investment property. The interest rate used reflects the need to continue to service the notes during the period that the defaulted loans are not generating any revenue. The 18- and 12- month time frames are based on worst-case estimates obtained from U.K. mortgage lenders.

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