## FANNIE MAE MONTHLY REPORTING DATA METHODOLOGY

Each month, Fannie Mae provides to certificateholders the following information as reported to us by the servicer of the mortgage loans. If a lender has delivered mortgages that are not within the parameters that a lender represents and warrants to us, the lender may be obligated to repurchase the affected mortgage loans. Certificateholders should make their own conclusions regarding the Monthly Reporting Data we provide.

## Seller and Servicer

We will provide the name of the seller (the entity that delivered the mortgage loans to us) and the servicers (the entity that is currently servicing the mortgage loans) for each pool. For pools that have multiple sellers, we will state "multiple." For pools that have multiple servicers, we will state "multiple." For pools (issued on or after May 1996) that have multiple servicers, we will provide a table listing the names of all servicers that service five or more percent of the pool's current unpaid principal balance, the number of loans serviced by each of these servicers, the percent of the pool's current unpaid principal balance that each services, and the aggregate current unpaid principal balance of the mortgage loans each of them services.

## Average Original Loan Size

We will calculate both a simple average and a quartile distribution of the original unpaid principal balances of all the underlying mortgage loans remaining in the pool at the time of calculation.

## Weighted Average Months to Next Rate Change Date

For adjustable-rate mortgage loans, we will calculate a weighted average of the number of months until the next interest rate change date for the mortgage loans remaining in the pool.

## Weighted Average Coupon Rate

We will calculate both a weighted average and a quartile distribution of the interest rates in effect on the underlying mortgage loans remaining in the pool. The value set forth is rounded to the third decimal place and the fourth decimal place will always be zero.

## Maximum Pool Accrual Rate

For a pool containing adjustable-rate mortgage loans, we will calculate the current maximum pool accrual rate that would accrue for that pool if all of the underlying mortgage loans remaining in the pool were accruing interest at the maximum rate provided in their respective loan documents.

## Minimum Pool Accrual Rate

For a pool containing adjustable-rate mortgage loans, we will calculate the minimum pool accrual rate that would accrue for that pool if all of the underlying mortgage loans remaining in the pool were accruing interest at the minimum rate provided in their respective loan documents. Generally, the minimum pool accrual rate will not be less than the MBS Margin.

## Per-Adjustment Rate Cap

For a pool containing adjustable-rate mortgage loans, we will display the highest percent that a rate can increase or decrease at each rate adjustment. For pools with multiple rate caps (e.g. $5 \%$ at first change, $2 \%$ at subsequent changes), we will display nines.

## Payment Change Frequency

For a pool containing adjustable-rate mortgage loans, we will display the number of months between changes in payment amount. We will display the initial fixed rate interest period during the month of issuance and the payment change frequency in subsequent months.

## Loan Age

We will calculate both a weighted average and a quartile distribution of the ages of the underlying mortgage loans remaining in the pool. The age of a mortgage loan is the number of months from origination of the mortgage loan to the current month. For purposes of calculating this data element, origination shall mean the date on which the first full month of interest begins to accrue on the mortgage loan.

## Loan Term

We will calculate both a weighted average and a quartile distribution of the loan terms of the underlying mortgage loans remaining in the pool. The loan term of a mortgage loan is the number of months in which regular scheduled borrower payments are due under the terms of the related mortgage note.

## Remaining Maturity

We will calculate both a weighted average and a quartile distribution of the calculated maturity for the underlying mortgage loans remaining in the pool. The calculated maturity for a mortgage loan is the number of months remaining until the borrower will pay off his mortgage loan, assuming that a borrower makes all future scheduled required payments on time as set forth in the mortgage note but makes no additional prepayment after the date of calculation. The calculated maturity for a loan may be earlier than the maturity date stated in the note if a borrower has made any partial prepayments prior to the date of calculation.

## Loan-to-Value Ratio

The Monthly Reporting Data provides both a weighted average and a quartile distribution of the loan-to-value ratios for the mortgage loans remaining in the pool, which are expressed as percentages. The loan-to-value ratios reported monthly will not reflect any amortization of the mortgage loan that occurs after the delivery date. We generally require the loan-to-value ratio of an underlying mortgage loan in a pool to be a comparison of the delivery date unpaid principal balance of the mortgage loan and either (1) in the case of a purchase, the lower of the sales price of a mortgaged property or its appraised value at the time of a sale or (2) in the case of a refinancing, the appraised or estimated value of the mortgaged property at the time or refinancing. However, we sometimes use other methods to determine the value of a mortgaged property. For instance, the loan-to-value ratio for some mortgage loans that are refinancings is based on a comparison of the delivery date unpaid principal balance of that loan and the value that was determined at the origination of the mortgage loan being refinanced. In any case, appraisals or other valuation methods are merely estimates of the mortgaged property values and may not reflect the actual amount received upon sale or liquidation. We state in our Monthly Reporting Data the percentage of the mortgage loans by current unpaid principal balance and the number of mortgage loans excluded from our weighted average and quartile calculations because they are outside of acceptable percentage parameters of one percent to one hundred percent. We also state in the Monthly Reporting Data "999" for government mortgage loans, such as mortgage loans insured by FHA or guaranteed by VA, for which no loan-to-value ratio was delivered by a lender.

## Credit Score of Borrowers

Credit scores are often used by the financial services industry to evaluate the quality of borrowers' credit. Credit scores are typically based on a proprietary statistical model that is developed for use by credit data repositories. These credit repositories apply the model to borrower credit information to come up with a credit score. One statistical model used widely in the financial services industry was developed by Fair, Isaac \& Company, Inc. ("Fair Isaac"). This model is used to create a credit score called the FICO® score. FICO® scores can vary depending on which credit repository is using the Fair Isaac model to supply the score. FICO® scores, as reported by the credit repositories, may range from a low of 150 to a high of 950 . According to Fair Isaac, a high FICO® score indicates a lesser degree of credit risk.

Lenders who provide us with credit scores typically deliver FICO® credit scores. If a lender has provided credit scores to us for underlying mortgage loans in a pool, we will provide both a weighted average and a quartile distribution of the scores in the Monthly Reporting Data. We have asked lenders to provide us credit scores, as a matter of course. The Monthly Reporting Data will set forth the percentage of loans, based on the unpaid principal balance, for which a lender has not delivered valid credit scores. These loans will be executed from the quartile distribution and from the weighted average calculation.

The credit scores provided to us by lenders were obtained at a single point between the date of application for a mortgage loan and the date of origination of a mortgage loan. Certificateholders should note that a borrower's credit score may have changed after the date the lender obtained it. Thus, a credit score obtained at application or at origination may have no relation to a borrower's current credit score, and the borrower's current credit score may not be reflected in the Monthly Reporting Data. We do not guarantee the methodology used to determine the credit score or the utility of a credit score to a certificateholder.

## Quartile Calculations

We calculate the quartile figures set forth in the Monthly Reporting Data as follows. For each mortgage loan characteristic where quartile figures appear, we order each loan in the pool from the highest to the lowest value. For example, we would, in the case of loan-to-value ratios, order each loan in the pool from that with the highest loan-to-value ratio to that with the lowest loan-to-value ratio. The lowest loan-to-value ratio would appear in the Monthly Reporting Data under "MIN." We determine the next figure in the quartile table for such mortgage loan characteristic by counting the loans starting with the lowest value and continuing upward until the current unpaid principal balance of the loans so counted equals twenty-five percent of the current unpaid principal balance of all the loans in the pool. The value associated with the last loan so counted appears in the quartile distribution table under " $25 \%$." We then determine the next figures in the quartile table by counting all of the loans starting with the lowest value and continuing upward until the current unpaid principal balance of the loans so counted equals fifty percent of
the current unpaid principal balance of all the loans in the pool. We then repeat this process to determine the value in the quartile table associated with seventy-five percent. The values of the last loan so counted in each case appears in the quartile distribution table under "MED" and " $75 \%$," respectively. The highest such value for any mortgage loan in a pool appears in the quartile distribution table under "MAX."

## Loan Purpose

We will provide information, in a tabular format, on the number of mortgage loans remaining in the pool that are either refinance mortgage loans or purchase money mortgage loans. We also will provide the current aggregate dollar amount of these mortgage loans and the percentage of the entire pool (by current unpaid principal balance) that these loans constitute.

## Property Type

We will provide information, in a tabular format, on the number of mortgage loans remaining in the pool that are secured by one-unit properties and by two- or four-unit properties. We also will provide the current aggregate dollar amount of these mortgage loans and the percentage of the entire pool (by current unpaid principal balance) that these loans constitute.

## Occupancy Type

We will provide information, in a tabular format, on the number of mortgage loans remaining in the pool that, as of their respective origination dates, were secured by principal residences, second homes, or investment properties. We also will provide the current aggregate dollar amount of these mortgage loans and the percentage of the entire pool (by current unpaid principal balance) that these loans constitute. The actual occupancy of the properties has not been verified.

## Origination Year

We will provide information, in a tabular format, regarding the aggregate current unpaid principal balance of the underlying mortgage loans remaining in the pool originated in a particular year, the count of the loans by such year, and the percentage of the pool's current unpaid principal balance that such loans constitute. For purposes of calculating this data element, the year of origination shall be the year in which the mortgage loan settlement occurred.

## Geographic Distribution

We will provide information, in a tabular format, regarding the geographic distribution by state of the mortgaged properties underlying the mortgage loans remaining in the pool. We will provide the count of the loans by state, the aggregate current unpaid principal balance of those loans, and the percentage of the pool's current unpaid principal balance that such loans constitute.

## Distribution of Loans by First Payment Date

For adjustable-rate mortgage loans remaining in the pool, we will provide information, in a tabular format, regarding the first payment date for each mortgage loan, the original note rate that corresponds to such first payment date, and the percentage of current scheduled unpaid principal balance of the mortgage loans that such first payment date and corresponding original note rate represent. Additionally, we will provide the loan survival ratio, which is calculated by dividing the current aggregate scheduled unpaid principal balance of the mortgage loans by the original aggregate scheduled unpaid principal balance of the mortgage loans.

## Gross Margins

For adjustable-rate mortgage loans remaining in the pool, we will calculate a weighted average of the mortgage loan margins (as stated in the mortgage note).

## Next Interest Rate Change Date Table

For adjustable-rate mortgage loans remaining in the pool, we will provide information, in a tabular format, regarding the next interest rate change date for the underlying mortgage loans, including the percentage of the pool (by current unpaid principal balance) that will have its next interest rate change on the listed dates, number of mortgage loans (by the next interest rate change date), MBS margin, coupon, caps, pool accrual rate, and floor information.

