# \$587,501,397 <br> Government National Mortgage Association GINNIE MAE ${ }^{\circledR}$ 



Guaranteed REMIC Pass-Through Securities
Ginnie Mae REMIC Trust 2002-78


> The securities may not be suitable investments for your. You should consider carefully the risks of investing in them.

See "Risk Factors" beginning on page $\mathbf{S}-7$ which highlights some of these risks.

## The Securities

The Trust will issue the Classes of Securities listed on the inside front cover.

The Ginnie Mae Guaranty
Ginnie Mae will guarantee the timely payment of principal and interest on the securities. The Ginnie Mae Guaranty is backed by the full faith and credit of the United States of America.

The Trust and its Assets
The Trust will own Ginnie Mae Certificates.

The Sponsor and the Co-Sponsor will offer the securities from time to time in negotiated transactions at varying prices. We expect the closing date to be November 29, 2002.

Iou should read the Base Offering Circular as well as this Supplement.
The securities are exempt from registration under the Securities Act of 1933 and are "exempted securities" under the Securities Exchange Act of 1934.

The date of this Offering Circular Supplement is November 21, 2002.

## Ginnie Mae REMIC Trust 2002-78

The Trust will issue the classes of securities listed in the table below.

| Class of REMIC Securities | Original Principal Balance(1) | Interest Rate | Principal Type(2) | Interest <br> Type(2) | $\begin{gathered} \text { Final } \\ \text { Distribution } \\ \text { Date(3) } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { CUSIP } \\ & \text { Number } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Security Group 1 |  |  |  |  |  |  |
| A | \$167,984,782 | 6.00\% | SEQ | FIX | April 2028 | $38373 Y \mathrm{FQ} 2$ |
| B | 32,015,218 | 6.00 | SEQ | FIX | April 2030 | 38373YFR0 |
| VA | 11,675,405 | 6.00 | SEQ / AD | FIX | June 2011 | 38373YFS 8 |
| VB | 20,824,595 | 6.00 | SEQ/AD | FIX | June 2020 | 38373YFT6 |
| Z | 17,500,000 | 6.00 | SEQ | FIX / Z | November 2032 | $38373 Y F U 3$ |
| Security Group 2 |  |  |  |  |  |  |
| DF | 5,982,352 | (4) | SUP | FLT/DLY | October 2031 | 38373YFV1 |
| DS | 1,834,589 | (4) | SUP | INV/DLY | October 2031 | 38373YFW9 |
| DT | 658,059 | (4) | SUP | INV/DLY | October 2031 | 38373YFX 7 |
| PA | 167,000,000 | 5.25 | PAC I/AD | FIX | March 2030 | 38373YFY5 |
| PI | 20,875,000 | 6.00 | NTL (PAC I) | FIX/IO | March 2030 | 38373YFZ2 |
| PZ | 9,886,855 | 6.00 | PAC I | FIX / Z | November 2032 | 38373YGA6 |
| TA | 29,423,000 | 6.00 | SUP | FIX | July 2031 | 38373YGB4 |
| TB | 1,280,000 | 6.00 | SUP | FIX | August 2031 | $38373 Y G C 2$ |
| TC | 2,908,000 | 6.00 | SUP | FIX | October 2031 | 38373YGD0 |
| TD | 5,944,000 | 6.00 | SUP | FIX | March 2032 | 38373YGE8 |
| TE | 11,171,000 | 6.00 | SUP | FIX | November 2032 | 38373 YGF5 |
| TG | 4,861,000 | 6.00 | PAC II | FIX | October 2032 | 38373YGG3 |
| TH | 1,908,000 | 6.00 | PAC II | FIX | November 2032 | 38373YGH1 |
| TJ | 618,145 | 6.00 | PAC II | FIX | November 2032 | 38373 Y GJ 7 |
| TL | 1,275,000 | 6.00 | SUP | FIX | October 2031 | 38373YGK4 |
| TM | 3,000,000 | 6.00 | SUP | FIX | June 2032 | 38373 YGL2 |
| TN | 2,250,000 | 6.00 | SUP | FIX | November 2032 | 38373 YGM0 |
| Security Group 3 |  |  |  |  |  |  |
| F. | 20,000,000 | (4) | PT | FLT | November 2032 | 38373YGN8 |
| FA | 64,644,254 | (4) | PT | FLT | November 2032 | $38373 Y \mathrm{YP} 3$ |
| PO | 2,857,143 | 0.00 | PT | PO | November 2032 | 38373YGQ1 |
| S | 20,000,000 | (4) | NTL (PT) | INV/IO | November 2032 | $38373 Y G R 9$ |
| SA | 64,644,254 | (4) | NTL (PT) | INV/IO | November 2032 | 38373 YGS 7 |
| Residual |  |  |  |  |  |  |
| RR | 0 | 0.00 | NPR | NPR | November 2032 | 38373 YGT5 |

(1) Subject to increase as described under "Increase in Size" in this Supplement. The amount shown for each Notional Class (indicated by "NTL" under Principal Type) is its original Class Notional Balance and does not represent principal that will be paid.
(2) As defined under "Class Types" in Appendix I to the Base Offering Circular. The type of Class with which the Class Notional Balance of each Notional Class will be reduced is indicated in parentheses.
(3) See "Yield, Maturity and Prepayment Considerations - Final Distribution Date" in this Supplement.
(4) See "Terms Sheet - Interest Rates" in this Supplement.

## AVAILABLE INFORMATION

You should purchase the securities only if you have read and understood the following documents:

- this Offering Circular Supplement (this "Supplement") and
- the Base Offering Circular.

The Base Offering Circular is available on Ginnie Mae's website located at http://www.ginniemae.gov.

If you do not have access to the internet, call JPMorgan Chase Bank, which will act as information agent for the Trust, at (800) 234-GNMA, to order copies of the Base Offering Circular.

Please consult the standard abbreviations of Class Types included in the Base Offering Circular as Appendix I and the Glossary included in the Base Offering Circular as Appendix II for definitions of capitalized terms.

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## TERMS SHEET

This terms sheet contains selected information for quick reference only. You should read this Supplement, particularly "Risk Factors," and each of the other documents listed under "Available Information."

Sponsor: Morgan Stanley \& Co. Incorporated
Trustee: State Street Bank and Trust Company
Tax Administrator: The Trustee
Closing Date: November 29, 2002
Distribution Dates: For the Group 1 and Group 2 Securities, the 20th day of each month or, if the 20th day is not a Business Day, the first Business Day thereafter, commencing in December 2002. For the Group 3 Securities, the 16th day of each month or if the 16th day is not a Business Day, the first Business Day thereafter, commencing in December 2002.

## Trust Assets:

| Trust <br> Asset <br> Group | $\underline{\text { Trust Asset Type }}$ | Certificate Rate | Original Term <br> To Maturity <br> (in years) |
| :---: | :--- | :---: | :---: |
| 1 | Ginnie Mae II | $6.0 \%$ | 30 |
| 2 | Ginnie Mae II | 6.0 | 30 |
| 3 | Ginnie Mae I | 7.0 | 30 |

Security Groups: This series of Securities consists of multiple Security Groups (each, a "Group"), as shown on the inside front cover of this Supplement. Payments on each Group will be based solely on payments on the Trust Asset Group with the same numerical designation.

## Assumed Characteristics of the Mortgage Loans Underlying the Trust Assets ${ }^{1}$ :


${ }^{1}$ As of November 1, 2002.
${ }^{2}$ Does not include Trust Assets that will be added to pay the Trustee Fee.
${ }^{3}$ The Mortgage Loans underlying the Group 1 and Group 2 Trust Assets may bear interest at rates ranging from $0.5 \%$ to $1.5 \%$ per annum above the related Certificate Rate.

The actual remaining terms to maturity, loan ages and, in the case of the Group 1 and Group 2 Trust Assets, Mortgage Rates of many of the Mortgage Loans will differ from the weighted averages shown above, perhaps significantly. See "The Trust Assets - The Mortgage Loans" in this Supplement.

Issuance of Securities: The Securities, other than the Residual Securities, will initially be issued in book-entry form through the book-entry system of the U.S. Federal Reserve Banks (the "Fedwire Book-Entry System"). The Residual Securities will be issued in fully registered, certificated form. See "Description of the Securities - Form of Securities" in this Supplement.

Increased Minimum Denomination Classes: Each Class that constitutes a Principal Only, Interest Only or Inverse Floating Rate Class. See "Description of the Securities - Form of Securities" in this Supplement.

Interest Rates: The Interest Rates for the Fixed Rate Classes are shown on the inside cover page of this Supplement.

The Floating Rate and Inverse Floating Rate Classes will bear interest at per annum rates based on one-month LIBOR (hereinafter referred to as "LIBOR") as follows:

| Class | Interest Rate Formula(1) | Initial Interest Rate(2) | Minimum Rate | $\begin{gathered} \text { Maximum } \\ \text { Rate } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Delay } \\ \text { (in days) } \\ \hline \end{gathered}$ | LIBOR <br> for Minimum Interest Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DF | LIBOR + 0.85\% | 2.23\% | 0.85\% | 8.50\% | 19 | 0.00\% |
| DS | 19.565208\% - (LIBOR x 3.260868 ) | 15.06521\% | 0.00\% | 19.565208\% | 19 | 6.00\% |
| DT | $69.54541 \%$ - (LIBOR x 9.090904) | 15.00\% | 0.00\% | 15.00\% | 19 | 7.65\% |
| F | LIBOR + 0.35\% | 2.18\% | 0.35\% | 8.00\% | 0 | 0.00\% |
| FA. | LIBOR + 0.70\% | 2.53\% | 0.70\% | 7.00\% | 0 | 0.00\% |
| S | 7.65\% - LIBOR | 5.82\% | 0.00\% | 7.65\% | 0 | 7.65\% |
| SA. | 6.30\% - LIBOR | 4.47\% | 0.00\% | 6.30\% | 0 | 6.30\% |

(1) LIBOR will be established on the basis of the BBA LIBOR method, as described under "Description of the Securities - Interest Distributions - Floating Rate and Inverse Floating Rate Classes" in this Supplement.
(2) The initial Interest Rate will be in effect during the first Accrual Period; the Interest Rate will adjust monthly thereafter.

Allocation of Principal: On each Distribution Date for a Security Group, the following distributions will be made to the related Securities:

## SECURITY GROUP 1

A percentage of the Group 1 Principal Distribution Amount will be applied to the Trustee Fee, and the remainder of the Group 1 Principal Distribution Amount (the "Group 1 Adjusted Principal Distribution Amount") and the Z Accrual Amount will be allocated as follows:

- The Z Accrual Amount, sequentially, to VA, VB and Z, in that order, until retired
- The Group 1 Adjusted Principal Distribution Amount, sequentially, to A, B, VA, VB and Z, in that order, until retired


## SECURITY GROUP 2

A percentage of the Group 2 Principal Distribution Amount will be applied to the Trustee Fee, and the remainder of the Group 2 Principal Distribution Amount (the "Group 2 Adjusted Principal Distribution Amount") and the PZ Accrual Amount will be allocated as follows:

- The PZ Accrual Amount, sequentially, to PA and PZ, in that order, until retired
- The Group 2 Adjusted Principal Distribution Amount in the following order of priority:

1. Sequentially, to PA and PZ , in that order, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date
2. Sequentially, to TG, TH and TJ, in that order, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date
3. Concurrently:
a. $22.8220186836 \%$ in the following order of priority:
i. Concurrently, to DF, DS, DT and TL, pro rata, until retired
ii. Sequentially, to TM and TN, in that order, until retired
b. $77.1779813164 \%$, sequentially, to TA, TB, TC, TD and TE, in that order, until retired
4. Sequentially, to TG, TH and TJ, in that order, without regard to their Aggregate Scheduled Principal Balances, until retired
5. Sequentially, to PA and PZ, in that order, without regard to their Aggregate Scheduled Principal Balances, until retired

## SECURITY GROUP 3

The Group 3 Principal Distribution Amount will be allocated, concurrently, to F, FA and PO, pro rata, until retired

Scheduled Principal Balances: The Aggregate Scheduled Principal Balances for the Classes listed below are included in Schedule I to this Supplement. They were calculated using, among other things, the following Structuring Ranges:

| Class | Structuring Ranges |
| :--- | :--- |
| PA and PZ (in the aggregate) $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | $125 \%$ PSA through $300 \%$ PSA |
| TG, TH and TJ (in the aggregate) $\ldots \ldots \ldots \ldots \ldots \ldots$ | $135 \%$ PSA through $200 \%$ PSA |

Accrual Classes: Interest will accrue on each Accrual Class identified on the inside front cover of this Supplement at the per annum rate set forth on that page. However, no interest will be distributed to the Accrual Class as interest. Interest so accrued on each Accrual Class on each Distribution Date will constitute an Accrual Amount, which will be added to the Class Principal Balance of that Class on each Distribution Date and will be distributable as principal as set forth in this Terms Sheet under "Allocation of Principal."

Notional Classes: The Notional Classes will not receive distributions of principal but have Class Notional Balances for convenience in describing their entitlements to interest. The Class Notional Balance of each Notional Class represents the percentage indicated below of, and reduces to that extent with, the Class Principal Balances indicated:

| Class |  | Original Class <br> Notional Balance |  |
| :--- | :--- | :--- | :--- |

Tax Status: Double REMIC Series. See "Certain Federal Income Tax Consequences" in this Supplement and in the Base Offering Circular.

Regular and Residual Classes: Class $R R$ is a Residual Class and includes the Residual Interest of the Issuing REMIC and the Pooling REMIC; all other Classes of REMIC Securities are Regular Classes.

## RISK FACTORS

You should purchase securities only if you understand and are able to bear the associated risks. The risks applicable to your investment depend on the principal and interest type of your securities. This section highlights certain of these risks.

## The rate of principal payments on the underlying mortgage loans will affect the rate of principal payments on your securi-

 ties. The rate at which you will receive principal payments will depend largely on the rate of principal payments, including prepayments, on the mortgage loans underlying the related trust assets. We expect the rate of principal payments on the underlying mortgage loans to vary. Borrowers generally may prepay their mortgage loans at any time without penalty.Rates of principal payments can reduce your yield. The yield on your securities probably will be lower than you expect if:

- you bought your securities at a premium (interest only securities, for example) and principal payments are faster than you expected, or
- you bought your securities at a discount (principal only securities, for example) and principal payments are slower than you expected.

In addition, if your securities are interest only securities or securities purchased at a significant premium, you could lose money on your investment if prepayments occur at a rapid rate.

The level of LIBOR will affect the yields on floating rate and inverse floating rate securities. If LIBOR performs differently from what you expect, the yield on your securities may be lower than you expect. Lower levels of LIBOR will generally reduce the yield on floating rate securities; higher levels of LIBOR will generally reduce the yield on inverse floating rate securities. You should bear in mind that the timing of changes in the level of LIBOR may affect your yield: generally, the earlier a change, the greater the effect on your yield. It is doubtful that LIBOR will remain constant.

An investment in the securities is subject to significant reinvestment risk. The rate of principal payments on your securities is uncertain. You may be unable to reinvest the payments on your securities at the same returns provided by the securities. Lower prevailing interest rates may result in an unexpected return of principal. In that interest rate climate, higher yielding reinvestment opportunities may be limited. Conversely, higher prevailing interest rates may result in slower returns of principal and you may not be able to take advantage of higher yielding investment opportunities. The final payment on your security may occur much earlier than the final distribution date.

## Support securities will be more sensitive to

 rates of principal payments than other securities. If principal prepayments result in principal distributions on any distribution date equal to or less than the amount needed to produce scheduled payments on the PAC classes, the support classes will not receive any principal distribution on that date (other than from any applicable accrual amount). If prepayments result in principal distributions on any distribution date greater than the amount needed to produce scheduled payments on the PAC classes for that distribution date, this excess will be distributed to the support classes.The securities may not be a suitable investment for you. The securities, in particular, support, interest only, principal only, inverse floating rate, accrual and residual classes, are not suitable investments for all investors.

In addition, although the sponsor intends to make a market for the purchase and sale of the securities after their initial issuance, it has no obligation to do so. There is no assurance that a secondary market will develop, that any secondary market will continue, or that the price at which you can sell an invest-
ment in any class will enable you to realize a desired yield on that investment.

You will bear the market risks of your investment. The market values of the classes are likely to fluctuate. These fluctuations may be significant and could result in significant losses to you.

The secondary markets for mortgage-related securities have experienced periods of illiquidity and can be expected to do so in the future. Illiquidity can have a severely adverse effect on the prices of classes that are especially sensitive to prepayment or interest rate risk or that have been structured to meet the investment requirements of limited categories of investors.

The residual securities may experience significant adverse tax timing consequences. Accordingly, you are urged to consult tax advisors and to consider the after-tax effect of ownership of a residual security and the suitability of the residual securities to your investment objectives. See "Certain Federal Income Tax Consequences" in this supplement and in the base offering circular.

You are encouraged to consult advisors regarding the financial, legal, tax and other aspects of an investment in the securities. You should not purchase the securities of any class unless you understand and are able to bear the prepayment, yield, liquidity and market risks associated with that class.

The actual characteristics of the underlying mortgage loans will affect the weighted average lives and yields of your securities.
The yield and prepayment tables in this supplement are based on assumed characteristics which are likely to be different from the actual characteristics. As a result, the yields on your securities could be lower than you expected, even if the mortgage loans prepay at the constant prepayment rates set forth in the applicable table.

It is highly unlikely that the underlying mortgage loans will prepay at any of the prepayment rates assumed in this supplement, or at any constant prepayment rate.

## THE TRUST ASSETS

## General

The Sponsor intends to acquire the Trust Assets in privately negotiated transactions prior to the Closing Date and to sell them to the Trust according to the terms of a Trust Agreement between the Sponsor and the Trustee. The Sponsor will make certain representations and warranties with respect to the Trust Assets. All Trust Assets will evidence, directly or indirectly, Ginnie Mae Certificates.

## The Trust MBS

The Groups 1 and 2 Trust Assets are either:

1. Ginnie Mae II MBS Certificates guaranteed by Ginnie Mae, or
2. Ginnie Mae Platinum Certificates backed by Ginnie Mae II MBS Certificates and guaranteed by Ginnie Mae.

Each Mortgage Loan underlying a Ginnie Mae II MBS Certificate bears interest at a Mortgage Rate $0.50 \%$ to $1.50 \%$ per annum greater than the related Certificate Rate. Ginnie Mae receives a fee (the "Ginnie Mae Certificate Guaranty Fee") for its guaranty of each Ginnie Mae II MBS Certificate of $0.06 \%$ per annum of the outstanding principal balance of each related Mortgage Loan. The difference between (a) the Mortgage Rate and (b) the sum of the Certificate Rate
and the Ginnie Mae Certificate Guaranty Fee is used to pay the related servicers of the Mortgage Loans a monthly servicing fee.

The Group 3 Trust Assets are either:

1. Ginnie Mae I MBS Certificates guaranteed by Ginnie Mae, or
2. Ginnie Mae Platinum Certificates backed by Ginnie Mae I MBS Certificates and guaranteed by Ginnie Mae.

Each Mortgage Loan underlying a Ginnie Mae I MBS Certificate bears interest at a Mortgage Rate $0.50 \%$ per annum greater than the related Certificate Rate. The difference between the Mortgage Rate and the Certificate Rate is used to pay the related servicers of the Mortgage Loans a monthly servicing fee and Ginnie Mae a fee for its guaranty of the Ginnie Mae I MBS Certificate of $0.44 \%$ per annum and $0.06 \%$ per annum, respectively, of the outstanding principal balance of the Mortgage Loan.

## The Mortgage Loans

The Mortgage Loans underlying the Trust Assets are expected to have, on a weighted average basis, the characteristics set forth in the Terms Sheet under "Assumed Characteristics of the Mortgage Loans Underlying the Trust Assets" and the general characteristics described in the Base Offering Circular. The Mortgage Loans will consist of first lien, single-family, fixed rate, residential mortgage loans that are insured or guaranteed by the Federal Housing Administration, the United States Department of Veterans Affairs, the Rural Housing Service or the United States Department of Housing and Urban Development ("HUD"). See "The Ginnie Mae Certificates - General'" in the Base Offering Circular.

Specific information regarding the characteristics of the Mortgage Loans is not available. For purposes of this Supplement, certain assumptions have been made regarding the remaining terms to maturity, loan ages and, in the case of the Group 1 and 2 Trust Assets, Mortgage Rates of the Mortgage Loans. However, the actual remaining terms to maturity, loan ages and, in the case of the Group 1 and 2 Trust Assets, Mortgage Rates of many of the Mortgage Loans will differ from the characteristics assumed, perhaps significantly. This will be the case even if the weighted average characteristics of the Mortgage Loans are the same as the assumed characteristics. Small differences in the characteristics of the Mortgage Loans can have a significant effect on the weighted average lives and yields of the Securities. See "Risk Factors" and "Yield, Maturity and Prepayment Considerations" in this Supplement.

## The Trustee Fee

On each Distribution Date, the Trustee will retain a fixed percentage of all principal and interest distributions received on specified Trust Assets in payment of its fee.

## GINNIE MAE GUARANTY

The Government National Mortgage Association ("Ginnie Mae"), a wholly-owned corporate instrumentality of the United States of America within HUD, guarantees the timely payment of principal and interest on the Securities. The General Counsel of HUD has provided an opinion to the effect that Ginnie Mae has the authority to guarantee multiclass securities and that Ginnie Mae guaranties will constitute general obligations of the United States, for which the full faith and credit of the United States is pledged. See "Ginnie Mae Guaranty" in the Base Offering Circular.

## DESCRIPTION OF THE SECURITIES

## General

The description of the Securities contained in this Supplement is not complete and is subject to, and is qualified in its entirety by reference to, all of the provisions of the Trust Agreement. See "Description of the Securities" in the Base Offering Circular.

## Form of Securities

Each Class of Securities other than the Residual Securities initially will be issued and maintained, and may be transferred only on the Fedwire Book-Entry System. Beneficial Owners of Book-Entry Securities will ordinarily hold these Securities through one or more financial intermediaries, such as banks, brokerage firms and securities clearing organizations that are eligible to maintain book-entry accounts on the Fedwire Book-Entry System. By request accompanied by the payment of a transfer fee of $\$ 25,000$ per Certificated Security to be issued, a Beneficial Owner may receive a Regular Security in certificated form.

The Residual Securities will not be issued in book-entry form but will be issued in fully registered, certificated form and may be transferred or exchanged, subject to the transfer restrictions applicable to Residual Securities set forth in the Trust Agreement, at the Corporate Trust Office of the Trustee. See "Description of the Securities - Forms of Securities; Book-Entry Procedures" in the Base Offering Circular.

Each Class (other than the Increased Minimum Denomination Classes) will be issued in minimum dollar denominations of initial principal balance of $\$ 1,000$ and integral multiples of $\$ 1$ in excess of $\$ 1,000$. The Increased Minimum Denomination Classes will be issued in the following minimum denominations:

| Class | Minimum Denomination |
| :---: | :---: |
| DS | \$ 101,000 |
| DT | \$ 100,000 |
| PI | \$ 556,000* |
| PO | \$ 120,000 |
| S | \$1,222,000* |
| SA | \$1,928,000* |

* Notional balance


## Distributions

Distributions on the Securities will be made on each Distribution Date as specified under "Terms Sheet - Distribution Dates" in this Supplement. On each Distribution Date for a Security, or in the case of the Certificated Securities, on the first Business Day after the related Distribution Date, the Distribution Amount will be distributed to the Holders of record as of the close of business on the last Business Day of the calendar month immediately preceding the month in which the Distribution Date occurs. Beneficial Owners of Book-Entry Securities will receive distributions through credits to accounts maintained for their benefit on the books and records of the appropriate financial intermediaries. Holders of Certificated Securities will receive distributions by check or, subject to the restrictions set forth in the Base Offering Circular, by wire transfer. See "Description of the Securities - Distributions" and "-Method of Distributions" in the Base Offering Circular.

## Interest Distributions

The Interest Distribution Amount will be distributed on each Distribution Date to the Holders of all Classes of Securities entitled to distributions of interest.

- Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months.
- Interest distributable on any Class for any Distribution Date will consist of 30 days' interest on its Class Principal Balance (or Class Notional Balance) as of the related Record Date.
- Investors can calculate the amount of interest to be distributed on each Class of Securities for any Distribution Date by using the Class Factors published in the preceding month. See "- Class Factors" below.


## Categories of Classes

For purposes of interest distributions, the Classes will be categorized as shown under "Interest Type" on the inside cover page of this Supplement. The abbreviations used on the inside cover page and in the Terms Sheet are explained under "Class Types" in Appendix I to the Base Offering Circular.

## Accrual Periods

The Accrual Period for each Class is set forth in the table below:

Class
Fixed Rate Classes and Delay Classes
Group 3 Floating Rate and Inverse Floating Rate Classes

Accrual Period
The calendar month preceding the related Distribution Date

From the 16 th day of the month preceding the month of the related Distribution Date through the 15 th day of the month of that Distribution Date

Fixed Rate Classes
Each Fixed Rate Class will bear interest at the per annum Interest Rate shown on the inside cover page of this Supplement.

## Floating Rate and Inverse Floating Rate Classes

The Floating Rate and Inverse Floating Rate Classes will bear interest as shown under "Terms Sheet - Interest Rates" in this Supplement. The Interest Rates for the Floating Rate and Inverse Floating Rate Classes will be based on LIBOR. LIBOR will be determined based on the BBA LIBOR method, as described under "Description of the Securities - Interest Rate Indices - Determination of LIBOR - BBA LIBOR" in the Base Offering Circular.

For information regarding the manner in which the Trustee determines LIBOR and calculates the Interest Rates for the Floating Rate and Inverse Floating Rate Classes, see "Description of the Securities - Interest Rate Indices - Determination of LIBOR" in the Base Offering Circular.

The Trustee's determination of LIBOR and its calculation of the Interest Rates will be final, except in the case of clear error. Investors can obtain LIBOR levels and Interest Rates for the current and preceding Accrual Periods from gREX or by calling the Information Agent at (800) 234-GNMA.

## Accrual Classes

Each of Class PZ and Class Z is an Accrual Class. Interest will accrue on the Accrual Classes and be distributed as described under "Terms Sheet - Accrual Classes" in this Supplement.

## Principal Distributions

The Principal Distribution Amount or the Adjusted Principal Distribution Amount for each Group and the PZ and Z Accrual Amounts will be distributed to the Holders entitled thereto as described under "Terms Sheet - Allocation of Principal" in this Supplement. Investors can calculate the amount of principal to be distributed with respect to any Distribution Date by using the Class Factors published in the preceding and current months. See "- Class Factors" below.

## Categories of Classes

For purposes of principal distributions, the Classes will be categorized as shown under "Principal Type" on the inside cover page of this Supplement. The abbreviations used on the inside cover page, and in the Terms Sheet are explained under "Class Types" in Appendix I to the Base Offering Circular.

## Notional Classes

The Notional Classes will not receive principal distributions. For convenience in describing interest distributions, the Notional Classes will have the original Class Notional Balances shown on the inside cover page of this Supplement. The Class Notional Balances will be reduced as shown under "Terms Sheet - Notional Classes" in this Supplement.

## Residual Securities

The Class RR Securities will represent the beneficial ownership of the Residual Interest in the Issuing REMIC and the beneficial ownership of the Residual Interest in the Pooling REMIC, as described under "Certain Federal Income Tax Consequences" in the Base Offering Circular. The Class RR Securities have no Class Principal Balance and do not accrue interest. The Class RR Securities will be entitled to receive the proceeds of the disposition of any assets remaining in the Trust REMICs after the Class Principal Balance of each Class of Regular Securities has been reduced to zero. However, any remaining proceeds are not likely to be significant. The Residual Securities may not be transferred to a Plan Investor, a Non-U.S. Person or a Disqualified Organization.

## Class Factors

The Trustee will calculate and make available for each Class of Securities, no later than the day preceding the applicable Distribution Date, the factor (carried out to eight decimal places) that when multiplied by the Original Class Principal Balance (or original Class Notional Balance) of that Class, determines the Class Principal Balance (or Class Notional Balance) after giving effect to the distribution of principal to be made on the Securities (and any addition to the Class Principal Balance of an Accrual Class) or any reduction of Class Notional Balance on that Distribution Date (each, a "Class Factor").

- The Class Factor for any Class of Securities for the month following the issuance of the Securities will reflect its remaining Class Principal Balance (or Class Notional Balance) after giving effect to any principal distribution (or addition to principal) to be made or
any reduction of Class Notional Balance on the Distribution Date occurring in that month.
- The Class Factor for each Class for the month of issuance is 1.00000000 .
- Based on the Class Factors published in the preceding and current months (and Interest Rates), investors in any Class (other than an Accrual Class) can calculate the amount of principal and interest to be distributed to that Class, and investors in any Accrual Class can calculate the total amount of principal to be distributed to (or interest to be added to the Class Principal Balance of) that Class on the Distribution Date in the current month.
- Investors may obtain current Class Factors on gREX.

See "Description of the Securities - Distributions" in the Base Offering Circular.

## Termination

The Trustee, at its option, may purchase or cause the sale of the Trust Assets and thereby terminate the Trust on any Distribution Date on which the aggregate of the Class Principal Balances of the Securities is less than $1 \%$ of the aggregate Original Class Principal Balances of the Securities. The Trustee will terminate the Trust and retire the Securities on any Distribution Date upon the Trustee's determination that the REMIC status of either Trust REMIC has been lost or that a substantial risk exists that this status will be lost for the then current taxable year.

Upon any termination of the Trust, the Holder of any outstanding Security (other than a Residual or Notional Class Security) will be entitled to receive that Holder's allocable share of the Class Principal Balance of that Class plus any accrued and unpaid interest thereon at the applicable Interest Rate, and any Holder of any outstanding Notional Class Security will be entitled to receive that Holder's allocable share of any accrued and unpaid interest thereon at the applicable Interest Rate. The Residual Holders will be entitled to their pro rata share of any assets remaining in the Trust REmICs after payment in full of the amounts described in the foregoing sentence. However, any remaining assets are not likely to be significant.

## YIELD, MATURITY AND PREPAYMENT CONSIDERATIONS

## General

The prepayment experience of the Mortgage Loans underlying the Trust Assets will affect the Weighted Average Lives of and the yields realized by investors in the related Securities.

- The Mortgage Loans do not contain "due-on-sale" provisions, and any Mortgage Loan may be prepaid in full or in part at any time without penalty.
- The rate of payments (including prepayments and payments in respect of liquidations) on the Mortgage Loans is dependent on a variety of economic, geographic, social and other factors, including prevailing market interest rates and general economic factors.

The rate of prepayments with respect to single-family mortgage loans has fluctuated significantly in recent years. Although there is no assurance that prepayment patterns for the Mortgage Loans will conform to patterns for more traditional types of conventional fixed-rate mortgage loans, generally:

- if mortgage interest rates fall materially below the Mortgage Rates on any of the Mortgage Loans (giving consideration to the cost of refinancing), the rate of prepayment of those Mortgage Loans would be expected to increase; and
- if mortgage interest rates rise materially above the Mortgage Rates on any of the Mortgage Loans, the rate of prepayment of those Mortgage Loans would be expected to decrease.

In addition, following any Mortgage Loan default and the subsequent liquidation of the underlying Mortgaged Property, the principal balance of the Mortgage Loan will be distributed through a combination of liquidation proceeds, advances from the related Ginnie Mae Issuer and, to the extent necessary, proceeds of Ginnie Mae's guaranty of the Ginnie Mae Certificates. As a result, defaults experienced on the Mortgage Loans will accelerate the distribution of principal of the Securities.

Under certain circumstances, the Trustee has the option to purchase the Trust Assets, thereby effecting early retirement of the Securities. See "Description of the Securities Termination" in this Supplement.

## Accretion Directed Classes

Classes PA, VA and VB are Accretion Directed Classes. The related Accrual Amount will be applied to making principal distributions on those Classes as described in this Supplement.

Each of Class VA and VB has the AD designation in the suffix position, rather than the prefix position, in its class principal type because it does not have principal payment stability through the applicable pricing prepayment assumption. Classes VA and VB will have principal payment stability only through the prepayment rate shown in the table below. Class PA is not listed in the table below because, although it is entitled to receive payments from the related Accrual Amounts, it does not have principal payment stability through any prepayment rate significantly higher than $0 \%$ PSA.

The Accretion Directed Classes are entitled to principal payments in an amount equal to interest accrued on the related Accrual Classes. With respect to the Classes listed in the table below, the Weighted Average Life of each such Class cannot exceed its Weighted Average Life as shown in the following table under any prepayment scenario, even a scenario where there are no prepayments.

- Moreover, based on the Modeling Assumptions, if the related Mortgage Loans prepay at any constant rate at or below the rate for an Accretion Directed Class shown in the table below, its Class Principal Balance would be reduced to zero on, but not before, its Final Distribution Date, and its Weighted Average Life would equal its maximum Weighted Average Life.
- However, the Weighted Average Lives of Classes VA and VB, will be reduced, and may be reduced significantly, at prepayment speeds higher than the constant rates shown in the table below. See "Yield, Maturity and Prepayment Considerations - Decrement Tables" in this Supplement.


## Accretion Directed Classes

| Class | Maximum Weighted <br> Average ife <br> (in Years) | 4.6 | Final Distribution Date |
| :--- | :---: | :---: | :---: |$\quad$| Prepayment Rate <br> at or below |
| :---: |

The Mortgage Loans will have characteristics that differ from those of the Modeling Assumptions. Therefore, even if the related Mortgage Loans prepay at a rate at or somewhat below the "at or below" rate shown for any Accretion Directed Class, the Class Principal Balance of that Class could be reduced to zero before its Final Distribution Date, and its Weighted Average Life could be shortened.

## Securities that Receive Principal on the Basis of Schedules

As described in this Supplement, each PAC Class will receive principal payments in accordance with a schedule calculated on the basis of, among other things, a Structuring Range. See "Terms Sheet - Scheduled Principal Balances." However, whether any such Class will adhere to its schedule and receive "Scheduled Payments" on a Distribution Date will largely depend on the level of prepayments experienced by the related Mortgage Loans.

Each PAC Class exhibits an Effective Range of constant prepayment rates at which such Class will receive Scheduled Payments. That range may differ from the Structuring Range used to create the related principal balance schedule. Based on the Modeling Assumptions, the initial Effective Ranges for the PAC Classes are as follows:

## PAC Classes

## Initial Effective Ranges

PA and PZ (in the aggregate) ....................... 125\% PSA through 300\% PSA
TG, TH and TJ (in the aggregate) ................. 135\% PSA through $200 \%$ PSA

- The principal payment stability of the PAC I Classes will be supported by the PAC II and Support Classes.
- The principal payment stability of the PAC II Classes will be supported by the Support Classes.


## If all of the Classes supporting a given Class are retired before the Class being supported is retired, the outstanding Class will no longer have an Effective Range and will become more sensitive to prepayments on the related Mortgage Loans.

There is no assurance that the related Mortgage Loans will have the characteristics assumed in the Modeling Assumptions, which were used to determine the initial Effective Ranges. If the initial Effective Ranges were calculated using the actual characteristics of the related Mortgage Loans, the initial Effective Ranges could differ from those shown in the above tables. Therefore, even if the Mortgage Loans were to prepay at a constant rate within the initial Effective Range shown for any Class in the above tables, that Class could fail to receive Scheduled Payments.

Moreover, the Mortgage Loans will not prepay at any constant rate. Non-constant prepayment rates can cause any PAC Class not to receive Scheduled Payments, even if prepayment rates remain within the initial Effective Range, if any, for that Class. Further, the Effective Range for any PAC Class can narrow or shift over time depending on the actual characteristics of the related Mortgage Loans.

If the related Mortgage Loans prepay at rates that are generally below the Effective Range for any PAC Class, the amount available to pay principal on the Securities may be insufficient to produce Scheduled Payments on that PAC Class, if any, and its Weighted Average Life may be extended, perhaps significantly.

If the related Mortgage Loans prepay at rates that are generally above the Effective Range for any PAC Class, its supporting Classes may be retired earlier than that PAC Class, and the Weighted Average Life of the PAC Class may be shortened, perhaps significantly.

## Assumability

Each Mortgage Loan may be assumed, subject to HUD review and approval, upon the sale of the related Mortgaged Property. See "Yield, Maturity and Prepayment Considerations Assumability of Government Loans" in the Base Offering Circular.

## Final Distribution Date

The Final Distribution Date for each Class, which is set forth on the inside cover page of this Supplement, is the latest date on which the related Class Principal Balance or Class Notional Balance will be reduced to zero.

- The actual retirement of any Class may occur earlier than its Final Distribution Date.
- According to the terms of the Ginnie Mae Guaranty, Ginnie Mae will guarantee payment in full of the Class Principal Balance of each Class of Securities no later than its Final Distribution Date.


## Modeling Assumptions

Unless otherwise indicated, the tables that follow have been prepared on the basis of the following assumptions (the "Modeling Assumptions"), among others:

1. The Mortgage Loans underlying the Trust Assets have the assumed characteristics shown under "Assumed Characteristics of the Mortgage Loans Underlying the Trust Assets" in the Terms Sheet, except in the case of information set forth under the $0 \%$ PSA Prepayment Assumption Rate, for which each Mortgage Loan is assumed to have an original and a remaining term to maturity of 360 months and each Mortgage Loan underlying a Group 1 or 2 Trust Asset is assumed to have a Mortgage Rate of $1.5 \%$ per annum higher than the related Certificate Rate.
2. The Mortgage Loans prepay at the constant percentages of PSA (described below) shown in the related table.
3. Distributions on the Group 1 and Group 2 Securities are always received on the 20 th day of the month, and distributions on the Group 3 Securities are always received on the 16 th day of the month, in each case, whether or not a Business Day, commencing in December 2002.
4. A termination of the Trust does not occur.
5. The Closing Date for the Securities is November 29, 2002.
6. No expenses or fees are paid by the Trust other than the Trustee Fee.

When reading the tables and the related text, investors should bear in mind that the Modeling Assumptions, like any other stated assumptions, are unlikely to be entirely consistent with actual experience.

- For example, most of the Mortgage Loans will not have the characteristics assumed, many Distribution Dates will occur on a Business Day after the 16 th or 20 th day of the month, as applicable, and the Trustee may cause a termination of the Trust as described under "Description of the Securities - Termination" in this Supplement.
- In addition, distributions on the Securities are based on Certificate Factors and Calculated Certificate Factors, if applicable, which may not reflect actual receipts on the Trust Assets.

See "Description of the Securities - Distributions" in the Base Offering Circular.

## Decrement Tables

Prepayments of mortgage loans are commonly measured by a prepayment standard or model. The model used in this Supplement ("PSA") is the standard prepayment assumption model of The Bond Market Association. PSA represents an assumed rate of prepayment each month relative to the then outstanding principal balance of the Mortgage Loans to which the model is applied. See 'Yield, Maturity and Prepayment Considerations - Standard Prepayment Assumption Models" in the Base Offering Circular.

The decrement tables set forth below are based on the assumption that the Mortgage Loans prepay at the indicated percentages of PSA (the "PSA Prepayment Assumption Rates"). As used in the table, each of the PSA Prepayment Assumption Rates reflects a percentage of the $100 \%$ PSA assumed prepayment rate. The Mortgage Loans will not prepay at any of the PSA Prepayment Assumption Rates and the timing of changes in the rate of prepayments actually experienced on the Mortgage Loans will not follow the pattern described for the PSA assumption.

The decrement tables set forth below illustrate the percentage of the Original Class Principal Balance (or, in the case of a Notional Class, the original Class Notional Balance) that would remain outstanding following the distribution made each specified month for each Regular Class, based on the assumption that the related Mortgage Loans prepay at the PSA Prepayment Assumption Rates. The percentages set forth in the following decrement tables have been rounded to the nearest whole percentage (including rounding down to zero).

The decrement tables also indicate the Weighted Average Life of each Class under each PSA Prepayment Assumption Rate. The Weighted Average Life of each Class is calculated by:
(a) multiplying the net reduction, if any, of the Class Principal Balance (or the net reduction of the Class Notional Balance, in the case of any Notional Class) from one Distribution Date to the next Distribution Date by the number of years from the date of issuance thereof to the related Distribution Date,
(b) summing the results, and
(c) dividing the sum by the aggregate amount of the assumed net reductions in principal balance or notional amount, as applicable, referred to in clause (a).

The information shown for each Notional Class is for illustrative purposes only, as a Notional Class is not entitled to distributions of principal and has no weighted average life. The weighted average life shown for each Notional Class has been calculated on the assumption that a reduction in the Class Notional Balance thereof is a distribution of principal.

The Weighted Average Lives are likely to vary, perhaps significantly, from those set forth in the tables below due to the differences between the actual characteristics of the Mortgage Loans underlying the related Trust Assets and the Modeling Assumptions.

## Percentages of Original Class Principal (or Class Notional) Balances and Weighted Average Lives

| Distribution Date | Security Group 1 <br> PSA Prepayment Assumption Rates |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Class A |  |  |  |  | Class B |  |  |  |  | Class VA |  |  |  |  |
|  | 0\% | 250\% | 492\% | 750\% | 1000\% | 0\% | 250\% | 492\% | 750\% | 1000\% | 0\% | 250\% | 492\% | 750\% | 1000\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 99 | 91 | 83 | 75 | 67 | 100 | 100 | 100 | 100 | 100 | 91 | 91 | 91 | 91 | 91 |
| November 2004 | 97 | 73 | 53 | 32 | 14 | 100 | 100 | 100 | 100 | 100 | 81 | 81 | 81 | 81 | 81 |
| November 2005 | 96 | 54 | 22 | 0 | 0 | 100 | 100 | 100 | 75 | 0 | 71 | 71 | 71 | 71 | 0 |
| November 2006 | 94 | 37 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 59 | 59 | 59 | 0 | 0 |
| November 2007 | 92 | 23 | 0 | 0 | 0 | 100 | 100 | 23 | 0 | 0 | 48 | 48 | 48 | 0 | 0 |
| November 2008. | 90 | 11 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 35 | 35 | 0 | 0 | 0 |
| November 2009 | 88 | 2 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 22 | 22 | 0 | 0 | 0 |
| November 2010 | 86 | 0 | 0 | 0 | 0 | 100 | 64 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 |
| November 2011 | 83 | 0 | 0 | 0 | 0 | 100 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2012 | 80 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2013. | 77 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2014 | 74 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2015. | 71 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2016. | 67 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2017. | 63 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2018. | 59 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2019. | 55 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2020. | 50 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2021. | 45 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2022 | 39 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2023. | 33 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2024 | 26 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2025. | 19 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2026. | 11 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2027. | 3 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2028. | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2029. | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2030. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2031. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2032. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average Life (years) ... | 16.5 | 3.4 | 2.1 | 1.6 | 1.3 | 26.4 | 8.4 | 4.7 | 3.2 | 2.5 | 4.6 | 4.6 | 4.0 | 3.1 | 2.5 |


| $\underline{\text { Distribution Date }}$ | PSA Prepayment Assumption Rates |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Class VB |  |  |  |  | Class Z |  |  |  |  |
|  | 0\% | 250\% | 492\% | 750\% | 1000\% | 0\% | 250\% | 492\% | 750\% | 1000\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 100 | 100 | 100 | 100 | 100 | 106 | 106 | 106 | 106 | 106 |
| November 2004 | 100 | 100 | 100 | 100 | 100 | 113 | 113 | 113 | 113 | 113 |
| November 2005 | 100 | 100 | 100 | 100 | 99 | 120 | 120 | 120 | 120 | 120 |
| November 2006 | 100 | 100 | 100 | 86 | 0 | 127 | 127 | 127 | 127 | 94 |
| November 2007 | 100 | 100 | 100 | 0 | 0 | 135 | 135 | 135 | 124 | 37 |
| November 2008. | 100 | 100 | 70 | 0 | 0 | 143 | 143 | 143 | 67 | 15 |
| November 2009 | 100 | 100 | 4 | 0 | 0 | 152 | 152 | 152 | 36 | 6 |
| November 2010 | 100 | 100 | 0 | 0 | 0 | 161 | 161 | 109 | 20 | 2 |
| November 2011 | 96 | 96 | 0 | 0 | 0 | 171 | 171 | 75 | 11 | 1 |
| November 2012 | 87 | 81 | 0 | 0 | 0 | 182 | 182 | 52 | 6 | 0 |
| November 2013 | 78 | 32 | 0 | 0 | 0 | 193 | 193 | 35 | 3 | 0 |
| November 2014 | 68 | 0 | 0 | 0 | 0 | 205 | 191 | 24 | 2 | 0 |
| November 2015. | 57 | 0 | 0 | 0 | 0 | 218 | 157 | 17 | 1 | 0 |
| November 2016. | 46 | 0 | 0 | 0 | 0 | 231 | 129 | 11 | 0 | 0 |
| November 2017 | 34 | 0 | 0 | 0 | 0 | 245 | 106 | 8 | 0 | 0 |
| November 2018. | 21 | 0 | 0 | 0 | 0 | 261 | 86 | 5 | 0 | 0 |
| November 2019 | 8 | 0 | 0 | 0 | 0 | 277 | 70 | 3 | 0 | 0 |
| November 2020. | 0 | 0 | 0 | 0 | 0 | 286 | 56 | 2 | 0 | 0 |
| November 2021. | 0 | 0 | 0 | 0 | 0 | 286 | 45 | 2 | 0 | 0 |
| November 2022. | 0 | 0 | 0 | 0 | 0 | 286 | 36 | 1 | 0 | 0 |
| November 2023. | 0 | 0 | 0 | 0 | 0 | 286 | 28 | 1 | 0 | 0 |
| November 2024 | 0 | 0 | 0 | 0 | 0 | 286 | 22 | 0 | 0 | 0 |
| November 2025. | 0 | 0 | 0 | 0 | 0 | 286 | 17 | 0 | 0 | 0 |
| November 2026. | 0 | 0 | 0 | 0 | 0 | 286 | 12 | 0 | 0 | 0 |
| November 2027. | 0 | 0 | 0 | 0 | 0 | 286 | 9 | 0 | 0 | 0 |
| November 2028. | 0 | 0 | 0 | 0 | 0 | 286 | 6 | 0 | 0 | 0 |
| November 2029. | 0 | 0 | 0 | 0 | 0 | 286 | 4 | 0 | 0 | 0 |
| November 2030. | 0 | 0 | 0 | 0 | 0 | 222 | 2 | 0 | 0 | 0 |
| November 2031. | 0 | 0 | 0 | 0 | 0 | 115 | 1 | 0 | 0 | 0 |
| November 2032. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average |  |  |  |  |  |  |  |  |  |  |
| Life (years) ... | 13.5 | 10.6 | 6.3 | 4.4 | 3.3 | 28.7 | 16.4 | 9.8 | 6.5 | 4.8 |

Security Group 2
PSA Prepayment Assumption Rates

| Distribution Date | Classes DF, DS, DT and TL |  |  |  |  | Classes PA and PI |  |  |  |  | Class PZ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 100 | 100 | 97 | 84 | 74 | 98 | 95 | 95 | 95 | 95 | 106 | 106 | 106 | 106 | 106 |
| November 2004 | 100 | 100 | 89 | 48 | 17 | 96 | 85 | 85 | 85 | 85 | 113 | 113 | 113 | 113 | 113 |
| November 2005 | 100 | 100 | 79 | 7 | 0 | 94 | 73 | 73 | 73 | 73 | 120 | 120 | 120 | 120 | 120 |
| November 2006. | 100 | 100 | 72 | 0 | 0 | 92 | 62 | 62 | 62 | 57 | 127 | 127 | 127 | 127 | 127 |
| November 2007. | 100 | 100 | 66 | 0 | 0 | 90 | 52 | 52 | 52 | 40 | 135 | 135 | 135 | 135 | 135 |
| November 2008. | 100 | 100 | 62 | 0 | 0 | 87 | 42 | 42 | 42 | 28 | 143 | 143 | 143 | 143 | 143 |
| November 2009 | 100 | 100 | 59 | 0 | 0 | 85 | 33 | 33 | 33 | 18 | 152 | 152 | 152 | 152 | 152 |
| November 2010. | 100 | 100 | 57 | 0 | 0 | 82 | 24 | 24 | 24 | 11 | 161 | 161 | 161 | 161 | 161 |
| November 2011 | 100 | 100 | 56 | 0 | 0 | 79 | 17 | 17 | 17 | 5 | 171 | 171 | 171 | 171 | 171 |
| November 2012. | 100 | 100 | 52 | 0 | 0 | 75 | 11 | 11 | 11 | 0 | 182 | 182 | 182 | 182 | 182 |
| November 2013 | 100 | 100 | 45 | 0 | 0 | 72 | 6 | 6 | 6 | 0 | 193 | 193 | 193 | 193 | 139 |
| November 2014 | 100 | 93 | 38 | 0 | 0 | 68 | 2 | 2 | 2 | 0 | 205 | 205 | 205 | 205 | 103 |
| November 2015 | 100 | 84 | 30 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 218 | 186 | 186 | 186 | 76 |
| November 2016. | 100 | 74 | 22 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 231 | 148 | 148 | 148 | 56 |
| November 2017. | 100 | 63 | 15 | 0 | 0 | 55 | 0 | 0 | 0 | 0 | 245 | 117 | 117 | 117 | 41 |
| November 2018. | 100 | 53 | 7 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 261 | 92 | 92 | 92 | 30 |
| November 2019. | 100 | 42 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 277 | 72 | 72 | 72 | 22 |
| November 2020. | 100 | 32 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 294 | 56 | 56 | 56 | 16 |
| November 2021. | 100 | 22 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 312 | 43 | 43 | 43 | 11 |
| November 2022. | 100 | 13 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 331 | 33 | 33 | 33 | 8 |
| November 2023. | 100 | 4 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 351 | 25 | 25 | 25 | 6 |
| November 2024 | 100 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 373 | 19 | 19 | 19 | 4 |
| November 2025. | 100 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 396 | 14 | 14 | 14 | 3 |
| November 2026. | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 283 | 10 | 10 | 10 | 2 |
| November 2027. | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 7 | 7 | 7 | 1 |
| November 2028. | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 5 | 1 |
| November 2029. | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 0 |
| November 2030. | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| November 2031. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| November 2032. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average Life (years) ... | 27.7 | 16.3 | 9.0 | 1.9 | 1.4 | 14.6 | 5.5 | 5.5 | 5.5 | 4.6 | 24.6 | 16.5 | 16.5 | 16.5 | 13.3 |

PSA Prepayment Assumption Rates

| Distribution Date | Class TA |  |  |  |  | Class TB |  |  |  |  | Class TC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 100 | 100 | 96 | 82 | 71 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2004 | 100 | 100 | 87 | 42 | 7 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2005 | 100 | 100 | 77 | 0 | 0 | 100 | 100 | 100 | 1 | 0 | 100 | 100 | 100 | 100 | 0 |
| November 2006 | 100 | 100 | 68 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2007 | 100 | 100 | 62 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2008 | 100 | 100 | 57 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2009 | 100 | 100 | 54 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2010 | 100 | 100 | 52 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2011 | 100 | 100 | 51 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2012 | 100 | 100 | 46 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2013 | 100 | 100 | 38 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2014 | 100 | 93 | 30 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2015. | 100 | 82 | 22 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2016 | 100 | 70 | 13 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2017. | 100 | 59 | 4 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2018. | 100 | 47 | 0 | 0 | 0 | 100 | 100 | 4 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2019. | 100 | 35 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 21 | 0 | 0 |
| November 2020. | 100 | 24 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 |
| November 2021. | 100 | 13 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 |
| November 2022. | 100 | 3 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 |
| November 2023. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 70 | 0 | 0 | 0 |
| November 2024 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2025. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2026. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2027. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2028. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2029. | 74 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2030. | 29 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2031. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2032. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Life (years) ... | 27.5 | 15.8 | 8.1 | 1.8 | 1.3 | 28.7 | 20.5 | 15.8 | 3.0 | 2.1 | 28.8 | 21.2 | 16.7 | 3.1 | 2.2 |

Security Group 2
PSA Prepayment Assumption Rates

| $\underline{\text { Distribution Date }}$ | Class TD |  |  |  |  | Class TE |  |  |  |  | Class TG |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 91 | 91 | 91 |
| November 2004 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 72 | 72 | 72 |
| November 2005 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 29 | 100 | 100 | 47 | 47 | 47 |
| November 2006 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 94 | 0 | 100 | 100 | 27 | 27 | 0 |
| November 2007 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 38 | 0 | 100 | 100 | 11 | 11 | 0 |
| November 2008. | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 5 | 0 | 100 | 100 | 0 | 0 | 0 |
| November 2009 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 0 | 0 | 0 |
| November 2010 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 99 | 0 | 0 | 0 |
| November 2011 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 77 | 0 | 0 | 0 |
| November 2012 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 30 | 0 | 0 | 0 |
| November 2013 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2014 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2015 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2016. | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2017. | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2018. | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2019. | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2020 | 100 | 100 | 73 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2021. | 100 | 100 | 38 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2022. | 100 | 100 | 6 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2023. | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 87 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2024 | 100 | 87 | 0 | 0 | 0 | 100 | 100 | 73 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2025. | 100 | 43 | 0 | 0 | 0 | 100 | 100 | 60 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2026. | 100 | 1 | 0 | 0 | 0 | 100 | 100 | 48 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2027. | 100 | 0 | 0 | 0 | 0 | 100 | 80 | 37 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| November 2028. | 100 | 0 | 0 | 0 | 0 | 100 | 61 | 27 | 0 | 0 | 74 | 0 | 0 | 0 | 0 |
| November 2029. | 100 | 0 | 0 | 0 | 0 | 100 | 43 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2030. | 100 | 0 | 0 | 0 | 0 | 100 | 26 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2031. | 73 | 0 | 0 | 0 | 0 | 100 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| November 2032. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average Life (years) ... | 29.1 | 22.9 | 18.7 | 3.6 | 2.4 | 29.7 | 26.7 | 24.2 | 4.8 | 2.9 | 26.1 | 9.5 | 3.0 | 3.0 | 2.5 |


| Distribution Date | Class TH |  |  |  |  | $\begin{array}{r} \text { PSA Pr } \\ \hline \text { Class TJ } \end{array}$ |  |  |  |  | Rates |  |  |  |  | Class TN |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% | 0\% | 125\% | 170\% | 300\% | 400\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2004 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| November 2005 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 43 |
| November 2006 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 28 | 0 | 100 | 100 | 100 | 100 | 0 |
| November 2007 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 55 | 0 |
| November 2008 | 100 | 100 | 96 | 96 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 7 | 0 |
| November 2009 | 100 | 100 | 72 | 0 | 0 | 100 | 100 | 100 | 88 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2010 | 100 | 100 | 54 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2011 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 60 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2012 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2013 | 100 | 14 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2014 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2015 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2016 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2017 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2018 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2019. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2020 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 78 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2021 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 58 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2022 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 39 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2023 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 21 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2024 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 86 | 5 | 0 | 0 | 100 | 100 | 100 | 0 | 0 |
| November 2025 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 60 | 0 | 0 | 0 | 100 | 100 | 88 | 0 | 0 |
| November 2026 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 36 | 0 | 0 | 0 | 100 | 100 | 70 | 0 | 0 |
| November 2027 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 13 | 0 | 0 | 0 | 100 | 100 | 54 | 0 | 0 |
| November 2028. | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 89 | 40 | 0 | 0 |
| November 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 63 | 28 | 0 | 0 |
| November 2030. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 39 | 16 | 0 | 0 |
| November 2031. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 0 | 0 | 0 | 0 | 100 | 16 | 7 | 0 | 0 |
| November 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average Life (years) ... | 26.3 | 10.8 | 7.7 | 6.5 | 3.4 | 26.4 | 11.2 | 9.0 | 7.2 | 3.5 | 29.2 | 23.5 | 19.5 | 3.8 | 2.5 | 29.8 | 27.6 | 25.6 | 5.2 | 3.0 |


| $\underline{\text { Distribution Date }}$ | Security Group 3 <br> PSA Prepayment Assumption Rates |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Classes F, FA, PO, S and SA |  |  |  |  |
|  | 0\% | 300\% | 591\% | 900\% | 1200\% |
| Initial Percent | 100 | 100 | 100 | 100 | 100 |
| November 2003 | 99 | 81 | 63 | 45 | 28 |
| November 2004 | 98 | 65 | 40 | 20 | 8 |
| November 2005 | 97 | 52 | 25 | 9 | 2 |
| November 2006 | 96 | 42 | 16 | 4 | 1 |
| November 2007 | 95 | 33 | 10 | 2 | 0 |
| November 2008 | 93 | 27 | 6 | 1 | 0 |
| November 2009 | 92 | 21 | 4 | 0 | 0 |
| November 2010 | 90 | 17 | 2 | 0 | 0 |
| November 2011 | 89 | 13 | 2 | 0 | 0 |
| November 2012 | 87 | 10 | 1 | 0 | 0 |
| November 2013 | 85 | 8 | 1 | 0 | 0 |
| November 2014 | 83 | 6 | 0 | 0 | 0 |
| November 2015 | 80 | 5 | 0 | 0 | 0 |
| November 2016 | 78 | 4 | 0 | 0 | 0 |
| November 2017 | 75 | 3 | 0 | 0 | 0 |
| November 2018 | 73 | 2 | 0 | 0 | 0 |
| November 2019 | 70 | 2 | 0 | 0 | 0 |
| November 2020 | 66 | 1 | 0 | 0 | 0 |
| November 2021 | 63 | 1 | 0 | 0 | 0 |
| November 2022 | 59 | 0 | 0 | 0 | 0 |
| November 2023 | 55 | 0 | 0 | 0 | 0 |
| November 2024 | 50 | 0 | 0 | 0 | 0 |
| November 2025 | 46 | 0 | 0 | 0 | 0 |
| November 2026 | 40 | 0 | 0 | 0 | 0 |
| November 2027 | 35 | 0 | 0 | 0 | 0 |
| November 2028 | 29 | 0 | 0 | 0 | 0 |
| November 2029 | 22 | 0 | 0 | 0 | 0 |
| November 2030 | 16 | 0 | 0 | 0 | 0 |
| November 2031 | 8 | 0 | 0 | 0 | 0 |
| November 2032 | 0 | 0 | 0 | 0 | 0 |
| Weighted Average |  |  |  |  |  |
| Life (years) . | 20.2 | 4.4 | 2.2 | 1.3 | 0.8 |

## Yield Considerations

An investor seeking to maximize yield should make a decision whether to invest in any Class based on the anticipated yield of that Class resulting from its purchase price, the investor's own projection of Mortgage Loan prepayment rates under a variety of scenarios, and, in the case of a Floating Rate or an Inverse Floating Rate Class, the investor's own projection of levels of LIBOR under a variety of scenarios. No representation is made regarding Mortgage Loan prepayment rates, LIBOR levels or the yield of any Class.

## Prepayments: Effect on Yields

The yields to investors will be sensitive in varying degrees to the rate of prepayments on the related Mortgage Loans.

- In the case of Regular Securities purchased at a premium (especially Interest Only Classes), faster than anticipated rates of principal payments could result in actual yields to investors that are lower than the anticipated yields.
- Investors in the Interest Only Classes should also consider the risk that rapid rates of principal payments could result in the failure of investors to recover fully their investments.
- In the case of Regular Securities purchased at a discount (especially the Principal Only Class), slower than anticipated rates of principal payments could result in actual yields to investors that are lower than the anticipated yields.

See "Risk Factors - Rates of principal payments can reduce your yield" in this Supplement.

Rapid rates of prepayments on the Mortgage Loans are likely to coincide with periods of low prevailing interest rates.

During periods of low prevailing interest rates, the yields at which an investor may be able to reinvest amounts received as principal payments on the investor's Class of Securities may be lower than the yield on that Class.

Slow rates of prepayments on the Mortgage Loans are likely to coincide with periods of high prevailing interest rates.

During periods of high prevailing interest rates, the amount of principal payments available to an investor for reinvestment at those high rates may be relatively low.

The Mortgage Loans will not prepay at any constant rate until maturity, nor will all of the Mortgage Loans underlying any Trust Asset Group prepay at the same rate at any one time. The timing of changes in the rate of prepayments may affect the actual yield to an investor, even if the average rate of principal prepayments is consistent with the investor's expectation. In general, the earlier a prepayment of principal on the Mortgage Loans, the greater the effect on an investor's yield. As a result, the effect on an investor's yield of principal prepayments occurring at a rate higher (or lower) than the rate anticipated by the investor during the period immediately following the Closing Date is not likely to be offset by a later equivalent reduction (or increase) in the rate of principal prepayments.

## LIBOR: Effect on Yields of the Floating Rate and Inverse Floating Rate Classes

Low levels of LIBOR can reduce the yield of the Floating Rate Classes. High levels of LIBOR can significantly reduce the yield of the Inverse Floating Rate Classes. In addition, the Floating Rate Classes will not benefit from a higher yield at high levels of LIBOR and Class DT may not benefit from particularly low levels of LIBOR because the rate on such Classes is capped at a maximum rate described under "Terms Sheet - Interest Rates."

## Payment Delay: Effect on Yields of the Fixed Rate Classes and Delay Classes

The effective yield on any Fixed Rate or Delay Class will be less than the yield otherwise produced by its Interest Rate and purchase price because, on each Distribution Date, 30 days' interest will be payable on (or added to the principal amount of) that Class even though interest began to accrue approximately 50 days earlier.

## Yield Tables

The following tables show the pre-tax yields to maturity on a corporate bond equivalent basis of specified Classes at various constant percentages of PSA.

The Mortgage Loans will not prepay at any constant rate until maturity, and it is unlikely that LIBOR will remain constant. Moreover, it is likely that the Mortgage Loans will experience actual prepayment rates that differ from those of the Modeling Assumptions. Therefore, the actual pre-tax yield of any Class may differ from those shown in the applicable table below for that Class even if the Class is purchased at the assumed price shown.

The yields were calculated by

1. determining the monthly discount rates that, when applied to the applicable assumed streams of cash flows to be paid on the applicable Class, would cause the discounted present value of the assumed streams of cash flows to equal the assumed purchase price of that Class plus accrued interest (in the case of interest-bearing Classes), and
2. converting the monthly rates to corporate bond equivalent rates.

These calculations do not take into account variations that may occur in the interest rates at which investors may be able to reinvest funds received by them as distributions on their Securities and consequently do not purport to reflect the return on any investment in any Class when those reinvestment rates are considered.

The information set forth in the following tables was prepared on the basis of the Modeling Assumptions and the assumptions that (1) the Interest Rate applicable to each Inverse Floating Rate Class for each Accrual Period following the first Accrual Period will be based on the indicated level of LIBOR and (2) the purchase price of each Class (expressed as a percentage of its original Class Principal Balance or Class Notional Balance) plus accrued interest (in the case of the interest-bearing Classes) is as indicated in the related table. The assumed purchase price is not necessarily that at which actual sales will occur.

## SECURITY GROUP 2

Sensitivity of Class DS to Prepayments Assumed Price 98.5625\% *

| LIBOR | PSA Prepayment Assumption Rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 125\% | 170\% | 300\% | 400\% |
| 0.38\% | 19.1\% | 19.2\% | 19.4\% | 19.4\% |
| 1.38\% | 15.7\% | 15.7\% | 16.0\% | 16.1\% |
| 4.38\% | 5.5\% | 5.5\% | 6.0\% | 6.3\% |
| 6.00\% | 0.1\% | 0.2\% | 0.8\% | 1.1\% |

## Sensitivity of Class DT to Prepayments Assumed Price 99.515625\%*

| LIBOR | PSA Prepayment Assumption Rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 125\% | 170\% | 300\% | 400\% |
| 6.000\% and below | 15.4\% | 15.4\% | 15.3\% | 15.2\% |
| 6.825\% | 7.6\% | 7.6\% | 7.7\% | 7.7\% |
| 7.650\% and above | 0.0\% | 0.1\% | 0.3\% | 0.4\% |

# Sensitivity of Class PI to Prepayments Assumed Price 18.0\%* 

PSA Prepayment Assumption Rates

| PSA Prepayment Assumption Rates |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1 2 5 \%}$ | $\frac{\mathbf{1 7 0 \%}}{\mathbf{2 0 . 1}}$ | $\frac{\mathbf{3 0 0 \%}}{20.1 \%}$ | $\frac{\mathbf{4 0 0 \%}}{16.5 \%}$ | $\mathbf{7 0 8 \%}$ |
| $\mathbf{2 0 . 1 \%}$ | $\mathbf{2 0 . 1 \%}$ | $\frac{\mathbf{7 0}}{20.0}$ |  |  |

[^0]
## SECURITY GROUP 3

## Sensitivity of Class PO to Prepayments <br> Assumed Price 83.46875\%

| PSA Prepayment Assumption Rates |  |  |  |
| :--- | :---: | :---: | :---: |
| $\mathbf{3 0 0 \%}$ | $\underline{\mathbf{5 9 1 \%} \%}$ | $\underline{\mathbf{9 0 0 \%}}$ | $\underline{\mathbf{1 2 0 0 \%}}$ |
| $\mathbf{4 . 5 \%}$ | $\mathbf{9 . 2 \%}$ | $\mathbf{1 6 . 3 \%}$ | $\mathbf{2 7 . 0 \%}$ |

## Sensitivity of Class S to Prepayments Assumed Price 8.1875\%*

| LIBOR | 300\% | 591\% | 900\% | 1200\% |
| :---: | :---: | :---: | :---: | :---: |
| 0.83\% | 68.9\% | 39.7\% | 3.7\% | (39.5)\% |
| 1.83\% | 54.3\% | 26.5\% | (7.7)\% | (48.7)\% |
| 4.83\% | 13.3\% | (10.4)\% | (39.4)\% | (74.2)\% |
| 7.65\% | ** | ** | ** |  |

Sensitivity of Class SA to Prepayments Assumed Price 5.1875\%*

| LIBOR | 300\% | 591\% | 900\% | 1200\% |
| :---: | :---: | :---: | :---: | :---: |
| 0.83\% | 97.7\% | 65.6\% | 26.1\% | (21.5)\% |
| 1.83\% | 73.2\% | 43.5\% | 7.0\% | (36.8)\% |
| 4.83\% | 7.0\% | (16.1)\% | (44.3)\% | (78.1)\% |
| 6.30\% | ** | ** | ** | ** |

[^1]
## CERTAIN FEDERAL INCOME TAX CONSEQUENCES

The following tax discussion, when read in conjunction with the discussion of "Certain Federal Income Tax Consequences" in the Base Offering Circular, describes the material federal income tax considerations for investors in the Securities. However, these two tax discussions do not purport to deal with all federal tax consequences applicable to all categories of investors, some of which may be subject to special rules.

Investors should consult their own tax advisors in determining the federal, state, local and any other tax consequences to them of the purchase, ownership and disposition of the Securities.

## REMIC Election

In the opinion of Cleary, Gottlieb, Steen \& Hamilton, the Trust will constitute a Double REMIC Series for federal income tax purposes.

## Regular Securities

The Regular Securities will be treated as debt instruments issued by the Issuing REMIC for federal income tax purposes. Income on the Regular Securities must be reported under an accrual method of accounting.

The Class PO Securities are Principal Only Securities. Principal Only Securities are treated for federal income tax purposes as having been issued with an amount of original issue discount ("OID") equal to the difference between their principal balance and their issue price.

The Class PI, S and SA Securities are "Interest Weighted Securities" as described in "Certain Federal Income Tax Consequences - Tax Treatment of Regular Securities - Interest Weighted Securities and Non-VRDI Securities" in the Base Offering Circular. Although the tax treatment of Interest Weighted Securities is not entirely certain, Holders of the Interest Weighted Securities should expect to accrue all income on these Securities (other than income attributable to market discount or de minimis market discount) under the OID rules based on the expected payments on these securities at the prepayment assumption described below.

The Class PZ and Z Securities are Accrual Securities. Holders of Accrual Securities are required to accrue all income from their Securities (other than income attributable to market discount or de minimis market discount) under the OID rules based on the expected payments on the Accrual Securities at the prepayment assumption described below.

Other than the Securities described in the preceding three paragraphs, based on anticipated prices (including accrued interest), the assumed Mortgage Loan characteristics, the prepayment assumption described below and, in the case of the Floating Rate Classes, the constant LIBOR value described below, no Classes are expected to be issued with OID.

Prospective investors in the Securities should be aware, however, that the foregoing expectations about OID could change because of differences (1) between anticipated purchase prices and actual purchase prices or (2) between the assumed characteristics of the Trust Assets and the characteristics of the Trust Assets actually delivered to the Trust. The prepayment assumption that should be used in determining the rates of accrual of OID, if any, on the Regular Securities is 492 \% PSA in the case of the Group 1 Securities, $170 \%$ PSA in the case of the Group 2 Securities and $591 \%$ PSA in the case of Group 3 Securities (as described in 'Yield, Maturity and Prepayment Considerations" in this Supplement). In the case of the Floating Rate Classes, the value of LIBOR to be used for these determinations is $1.38 \%$ in the case of the Group 2 Securities and $1.83 \%$ in the case of the Group 3 Securities. No representation is made, however, about the rate at which prepayments on the Mortgage Loans underlying any Group of Trust Assets actually will occur or the level of LIBOR at any time after the date of this Supplement. See "Certain Federal Income Tax Consequences" in the Base Offering Circular.

The Regular Securities generally will be treated as "regular interests" in a REMIC for domestic building and loan associations, "permitted assets" for financial asset securitization investment trusts ("FASITs"), and "real estate assets" for real estate investment trusts ("REITs") as described in "Certain Federal Income Tax Consequences" in the Base Offering Circular. Similarly, interest on the Regular Securities will be considered "interest on obligations secured by mortgages on real property" for REITs.

## Residual Securities

The Class RR Securities will represent the beneficial ownership of the Residual Interest in the Pooling REMIC and the beneficial ownership of the Residual Interest in the Issuing REMIC. The Residual Securities, i.e., the Class RR Securities, generally will be treated as "residual
interests" in a REMIC for domestic building and loan associations and as "real estate assets" for REITs, as described in "Certain Federal Income Tax Consequences" in the Base Offering Circular, but will not be treated as debt for federal income tax purposes. Instead, the Holders of the Residual Securities will be required to report, and will be taxed on, their pro rata shares of the taxable income or loss of the Trust REMICs, and these requirements will continue until there are no Securities of any Class outstanding. Thus, Residual Holders will have taxable income attributable to the Residual Securities even though they will not receive principal or interest distributions with respect to the Residual Securities, which could result in a negative after-tax return for the Residual Holders. It is not expected that the Pooling REMIC will have a substantial amount of taxable income or loss in any period. However, even though the Holders of the Class RR Securities are not entitled to any stated principal or interest payments on the Class RR Securities, the Issuing REMIC may have substantial taxable income in certain periods, and offsetting tax losses may not occur until much later periods. Accordingly, a Holder of the Class RR Securities may experience substantial adverse tax timing consequences. Prospective investors are urged to consult their own tax advisors and consider the after-tax effect of ownership of the Residual Securities and the suitability of the Residual Securities to their investment objectives.

Prospective Holders of Residual Securities should be aware that, at issuance, based on the expected prices of the Regular and Residual Securities and the prepayment assumption described above, the residual interests represented by the Residual Securities will be treated as "noneconomic residual interests" as that term is defined in Treasury regulations.

The proposed Treasury Regulations referred to in the Base Offering Circular relating to transfers of noneconomic residual interests were finalized recently. See "Certain Federal Income Tax Consequences - Tax Treatment of Residual Securities - Non-Recognition of Certain Transfers for Federal Income Tax Purposes" in the Base Offering Circular. With certain exceptions, the final regulations incorporate the safe harbor rules in the proposed regulations (the "present value test") and in Revenue Procedure 2001-12 (the "asset test"). Among other things, the final regulations modify the present value test to require use of the federal short term rate for the month of transfer for purposes of the present value calculations. In addition, in order to qualify for either safe harbor (the present value or asset test), a transfer of a noneconomic residual interest may not be to a foreign permanent establishment or fixed base of a U.S. taxpayer (an "offshore location"), and each transferee must represent that it will not cause income from the noneconomic residual interest to be attributable to an offshore location of the transferee or another U.S. taxpayer. The final regulations generally apply to transfers of noneconomic residual interests occurring on or after February 4, 2000, although the modifications noted above generally apply to transfers occurring on or after August 19, 2002.

Prospective Holders of Residual Securities should consult their tax advisors regarding the final regulations and their application to transfers of Residual Securities.

## ERISA MATTERS

Ginnie Mae guarantees distributions of principal and interest with respect to the Securities. The Ginnie Mae Guaranty is supported by the full faith and credit of the United States of America. The Regular Securities will qualify as "guaranteed governmental mortgage pool certificates" within the meaning of a Department of Labor regulation, the effect of which is to provide that mortgage loans and participations therein underlying a "guaranteed governmental mortgage pool certificate" will not be considered assets of an employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), or subject to
section 4975 of the Code (each, a "Plan"), solely by reason of the Plan's purchase and holding of that certificate.

Governmental plans and certain church plans, while not subject to the fiduciary responsibility provisions of ERISA or the prohibited transaction provisions of ERISA and the Code, may nevertheless be subject to local, state or other federal laws that are substantially similar to the foregoing provisions of ERISA and the Code. Fiduciaries of any such plans should consult with their counsel before purchasing any of the Securities.

Plan Investors should consult with their advisors, however, to determine whether the purchase, holding, or resale of a Security could give rise to a transaction that is prohibited or is not otherwise permissible under either ERISA or the Code.

See "ERISA Considerations" in the Base Offering Circular.
The Residual Securities are not offered to, and may not be transferred to, a Plan Investor.

## LEGAL INVESTMENT CONSIDERATIONS

Institutions whose investment activities are subject to legal investment laws and regulations or to review by certain regulatory authorities may be subject to restrictions on investment in the Securities. No representation is made about the proper characterization of any Class for legal investment or other purposes, or about the permissibility of the purchase by particular investors of any Class under applicable legal investment restrictions.

Investors should consult their own legal advisors regarding applicable investment restrictions and the effect of any restrictions on the liquidity of the Securities prior to investing in the Securities.

See "Legal Investment Considerations" in the Base Offering Circular.

## PLAN OF DISTRIBUTION

Subject to the terms and conditions of the Sponsor Agreement, the Sponsor has agreed to purchase all of the Securities if any are sold and purchased. The Sponsor proposes to offer each Class to the public from time to time for sale in negotiated transactions at varying prices to be determined at the time of sale, plus accrued interest, if any, from (1) November 1, 2002 on the Fixed Rate and Delay Classes, and (2) November 16, 2002 on the Group 3 Floating Rate and Inverse Floating Rate Classes. The Sponsor may effect these transactions by sales to or through certain securities dealers. These dealers may receive compensation in the form of discounts, concessions or commissions from the Sponsor and/or commissions from any purchasers for which they act as agents. Some of the Securities may be sold through dealers in relatively small sales. In the usual case, the commission charged on a relatively small sale of securities will be a higher percentage of the sales price than that charged on a large sale of securities.

## INCREASE IN SIZE

Before the Closing Date, Ginnie Mae, the Trustee and the Sponsor may agree to increase the size of this offering. In that event, the Securities will have the same characteristics as described in this Supplement, except that the Original Class Principal Balance (or original Class Notional Balance) and (2) the Aggregate Scheduled Principal of each Class receiving principal distributions or interest distributions based upon a notional balance from the same Trust Asset Group will increase by the same proportion. The Trust Agreement, the Final Data

Statement, and the Supplemental Statement, if any, will reflect any increase in the size of the transaction.

## LEGAL MATTERS

Certain legal matters will be passed upon for Ginnie Mae by Sidley Austin Brown \& Wood LLP, New York, NY, for the Trust by Cleary, Gottlieb Steen \& Hamilton and Marcell Solomon \& Associates P.C., and for the Trustee by Nixon Peabody LLP.

## SCHEDULED PRINCIPAL BALANCES

| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ (in the aggregate) |
| :---: | :---: | :---: |
| Initial Balance. | \$176,886,855.00 | \$7,387,145.00 |
| December 2002 | 176,512,852.17 | 7,374,565.90 |
| January 2003 | 176,085,609.81 | 7,357,800.99 |
| February 2003 | 175,605,260.61 | 7,336,861.39 |
| March 2003 | 175,071,971.53 | 7,311,763.76 |
| April 2003 | 174,485,943.67 | 7,282,530.39 |
| May 2003 | 173,847,412.29 | 7,249,189.14 |
| June 2003 | 173,156,646.69 | 7,211,773.45 |
| July 2003 | 172,413,950.04 | 7,170,322.30 |
| August 2003. | 171,619,659.26 | 7,124,880.17 |
| September 2003 | 170,774,144.74 | 7,075,497.05 |
| October 2003 | 169,877,810.16 | 7,022,228.32 |
| November 2003 | 168,931,092.18 | 6,965,134.73 |
| December 2003 | 167,934,460.12 | 6,904,282.31 |
| January 2004 | 166,888,415.58 | 6,839,742.31 |
| February 2004 | 165,793,492.10 | 6,771,591.10 |
| March 2004 | 164,650,254.70 | 6,699,910.05 |
| April 2004 | 163,459,299.43 | 6,624,785.46 |
| May 2004 | 162,221,252.85 | 6,546,308.44 |
| June 2004 | 160,936,771.54 | 6,464,574.77 |
| July 2004 | 159,606,541.51 | 6,379,684.77 |
| August 2004 | 158,231,277.62 | 6,291,743.16 |
| September 2004 | 156,811,722.94 | 6,200,858.91 |
| October 2004 | 155,348,648.09 | 6,107,145.12 |
| November 2004 | 153,842,850.57 | 6,010,718.78 |
| December 2004 | 152,295,154.03 | 5,911,700.68 |
| January 2005 | 150,706,407.49 | 5,810,215.21 |
| February 2005 | 149,077,484.65 | 5,706,390.11 |
| March 2005 | 147,409,282.99 | 5,600,356.39 |
| April 2005 | 145,752,078.14 | 5,496,086.67 |
| May 2005 | 144,105,798.73 | 5,393,562.36 |
| June 2005 | 142,470,373.85 | 5,292,765.06 |
| July 2005 | 140,845,733.03 | 5,193,676.55 |
| August 2005. | 139,231,806.28 | 5,096,278.75 |
| September 2005 | 137,628,524.06 | 5,000,553.76 |
| October 2005 | 136,035,817.27 | 4,906,483.85 |
| November 2005 | 134,453,617.26 | 4,814,051.44 |
| December 2005 | 132,881,855.84 | 4,723,239.10 |
| January 2006 | 131,320,465.23 | 4,634,029.60 |
| February 2006 | 129,769,378.12 | 4,546,405.82 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ (in the aggregate) |
| :---: | :---: | :---: |
| March 2006 | \$128,228,527.63 | \$4,460,350.82 |
| April 2006 | 126,697,847.30 | 4,375,847.81 |
| May 2006 | 125,177,271.11 | 4,292,880.18 |
| June 2006 | 123,666,733.47 | 4,211,431.42 |
| July 2006 | 122,166,169.20 | 4,131,485.23 |
| August 2006 | 120,675,513.56 | 4,053,025.41 |
| September 2006 | 119,194,702.22 | 3,976,035.94 |
| October 2006 | 117,723,671.28 | 3,900,500.93 |
| November 2006 | 116,262,357.23 | 3,826,404.66 |
| December 2006 | 114,810,696.99 | 3,753,731.52 |
| January 2007 | 113,368,627.89 | 3,682,466.07 |
| February 2007 | 111,936,087.64 | 3,612,593.02 |
| March 2007 | 110,513,014.39 | 3,544,097.18 |
| April 2007 | 109,099,346.67 | 3,476,963.55 |
| May 2007 | 107,695,023.40 | 3,411,177.24 |
| June 2007 | 106,299,983.92 | 3,346,723.49 |
| July 2007 | 104,914,167.95 | 3,283,587.71 |
| August 2007 | 103,537,515.60 | 3,221,755.41 |
| September 2007 | 102,169,967.36 | 3,161,212.26 |
| October 2007 | 100,811,464.12 | 3,101,944.05 |
| November 2007 | 99,461,947.15 | 3,043,936.70 |
| December 2007 | 98,121,358.09 | 2,987,176.28 |
| January 2008 | 96,789,638.97 | 2,931,648.96 |
| February 2008 | 95,466,732.19 | 2,877,341.06 |
| March 2008 | 94,152,580.53 | 2,824,239.02 |
| April 2008 | 92,847,127.13 | 2,772,329.40 |
| May 2008 | 91,550,315.49 | 2,721,598.93 |
| June 2008 | 90,262,089.52 | 2,672,034.37 |
| July 2008 | 88,982,393.43 | 2,623,622.71 |
| August 2008. | 87,711,171.85 | 2,576,350.98 |
| September 2008 | 86,448,369.73 | 2,530,206.38 |
| October 2008 | 85,193,932.39 | 2,485,176.21 |
| November 2008 | 83,947,805.50 | 2,441,247.90 |
| December 2008 | 82,709,935.09 | 2,398,408.98 |
| January 2009 | 81,480,267.54 | 2,356,647.10 |
| February 2009 | 80,258,749.57 | 2,315,950.05 |
| March 2009 | 79,045,328.24 | 2,276,305.71 |
| April 2009 | 77,839,950.96 | 2,237,702.10 |
| May 2009 | 76,642,565.50 | 2,200,127.29 |
| June 2009 | 75,453,119.93 | 2,163,569.56 |
| July 2009 | 74,271,562.68 | 2,128,017.21 |
| August 2009. | 73,097,842.52 | 2,093,458.71 |
| September 2009 | 71,931,908.53 | 2,059,882.60 |
| October 2009 | 70,773,710.14 | 2,027,277.56 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ (in the aggregate) |
| :---: | :---: | :---: |
| November 2009 | \$ 69,623,197.10 | \$1,995,632.35 |
| December 2009 | 68,480,319.48 | 1,964,935.86 |
| January 2010 | 67,345,027.68 | 1,935,177.06 |
| February 2010 | 66,217,272.42 | 1,906,345.05 |
| March 2010 | 65,097,004.74 | 1,878,429.02 |
| April 2010 | 63,984,175.99 | 1,851,418.27 |
| May 2010 | 62,878,737.85 | 1,825,302.19 |
| June 2010 | 61,780,642.31 | 1,800,070.26 |
| July 2010 | 60,689,841.65 | 1,775,712.10 |
| August 2010. | 59,606,288.48 | 1,752,217.41 |
| September 2010 | 58,532,212.62 | 1,727,299.06 |
| October 2010 | 57,476,797.52 | 1,691,716.71 |
| November 2010 | 56,439,725.81 | 1,645,731.25 |
| December 2010 | 55,420,685.45 | 1,589,598.62 |
| January 2011 | 54,419,369.64 | 1,523,569.92 |
| February 2011 | 53,435,476.71 | 1,447,891.50 |
| March 2011 | 52,468,710.08 | 1,362,805.03 |
| April 2011 | 51,518,778.15 | 1,268,547.57 |
| May 2011 | 50,585,394.20 | 1,165,351.69 |
| June 2011 | 49,668,276.35 | 1,053,445.50 |
| July 2011 | 48,767,147.45 | 933,052.74 |
| August 2011 | 47,881,734.99 | 804,392.92 |
| September 2011 | 47,011,771.06 | 667,681.30 |
| October 2011 | 46,156,992.26 | 523,128.99 |
| November 2011 | 45,317,139.59 | 370,943.09 |
| December 2011 | 44,491,958.44 | 214,466.93 |
| January 2012 | 43,681,198.46 | 54,688.82 |
| February 2012 | 42,884,613.52 | 0.00 |
| March 2012 | 42,101,961.61 | 0.00 |
| April 2012 | 41,333,004.84 | 0.00 |
| May 2012 | 40,577,509.26 | 0.00 |
| June 2012 | 39,835,244.92 | 0.00 |
| July 2012 | 39,105,985.70 | 0.00 |
| August 2012. | 38,389,509.29 | 0.00 |
| September 2012 | 37,685,597.15 | 0.00 |
| October 2012 | 36,994,034.40 | 0.00 |
| November 2012 | 36,314,609.78 | 0.00 |
| December 2012 | 35,647,115.59 | 0.00 |
| January 2013 | 34,991,347.63 | 0.00 |
| February 2013 | 34,347,105.16 | 0.00 |
| March 2013 | 33,714,190.80 | 0.00 |
| April 2013 | 33,092,410.50 | 0.00 |
| May 2013 | 32,481,573.49 | 0.00 |
| June 2013. | 31,881,492.22 | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ (in the aggregate) |  |
| :---: | :---: | :---: | :---: |
| July 2013 | \$ 31,291,982.30 | \$ | 0.00 |
| August 2013. | 30,712,862.43 |  | 0.00 |
| September 2013 | 30,143,954.41 |  | 0.00 |
| October 2013 | 29,585,083.02 |  | 0.00 |
| November 2013 | 29,036,075.99 |  | 0.00 |
| December 2013 | 28,496,763.99 |  | 0.00 |
| January 2014 | 27,966,980.52 |  | 0.00 |
| February 2014 | 27,446,561.90 |  | 0.00 |
| March 2014 | 26,935,347.22 |  | 0.00 |
| April 2014 | 26,433,178.28 |  | 0.00 |
| May 2014 | 25,939,899.57 |  | 0.00 |
| June 2014 | 25,455,358.19 |  | 0.00 |
| July 2014 | 24,979,403.83 |  | 0.00 |
| August 2014 | 24,511,888.72 |  | 0.00 |
| September 2014 | 24,052,667.59 |  | 0.00 |
| October 2014 | 23,601,597.63 |  | 0.00 |
| November 2014 | 23,158,538.45 |  | 0.00 |
| December 2014 | 22,723,352.01 |  | 0.00 |
| January 2015 | 22,295,902.64 |  | 0.00 |
| February 2015 | 21,876,056.95 |  | 0.00 |
| March 2015 | 21,463,683.81 |  | 0.00 |
| April 2015 | 21,058,654.29 |  | 0.00 |
| May 2015 | 20,660,841.68 |  | 0.00 |
| June 2015 | 20,270,121.40 |  | 0.00 |
| July 2015 | 19,886,370.97 |  | 0.00 |
| August 2015. | 19,509,470.00 |  | 0.00 |
| September 2015 | 19,139,300.13 |  | 0.00 |
| October 2015 | 18,775,745.01 |  | 0.00 |
| November 2015 | 18,418,690.27 |  | 0.00 |
| December 2015 | 18,068,023.47 |  | 0.00 |
| January 2016 | 17,723,634.08 |  | 0.00 |
| February 2016 | 17,385,413.45 |  | 0.00 |
| March 2016 | 17,053,254.77 |  | 0.00 |
| April 2016 | 16,727,053.04 |  | 0.00 |
| May 2016 | 16,406,705.04 |  | 0.00 |
| June 2016 | 16,092,109.32 |  | 0.00 |
| July 2016 | 15,783,166.13 |  | 0.00 |
| August 2016. | 15,479,777.42 |  | 0.00 |
| September 2016 | 15,181,846.83 |  | 0.00 |
| October 2016 | 14,889,279.60 |  | 0.00 |
| November 2016 | 14,601,982.61 |  | 0.00 |
| December 2016 | 14,319,864.31 |  | 0.00 |
| January 2017 | 14,042,834.71 |  | 0.00 |
| February 2017 | 13,770,805.35 |  | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ <br> (in the aggregate) |  |
| :---: | :---: | :---: | :---: |
| March 2017 | \$ 13,503,689.27 | \$ | 0.00 |
| April 2017 | 13,241,401.00 |  | 0.00 |
| May 2017 | 12,983,856.52 |  | 0.00 |
| June 2017 | 12,730,973.24 |  | 0.00 |
| July 2017 | 12,482,669.97 |  | 0.00 |
| August 2017 | 12,238,866.92 |  | 0.00 |
| September 2017 | 11,999,485.64 |  | 0.00 |
| October 2017 | 11,764,449.03 |  | 0.00 |
| November 2017 | 11,533,681.30 |  | 0.00 |
| December 2017 | 11,307,107.94 |  | 0.00 |
| January 2018 | 11,084,655.75 |  | 0.00 |
| February 2018 | 10,866,252.72 |  | 0.00 |
| March 2018 | 10,651,828.12 |  | 0.00 |
| April 2018 | 10,441,312.40 |  | 0.00 |
| May 2018 | 10,234,637.21 |  | 0.00 |
| June 2018 | 10,031,735.35 |  | 0.00 |
| July 2018 | 9,832,540.78 |  | 0.00 |
| August 2018. | 9,636,988.60 |  | 0.00 |
| September 2018 | 9,445,014.99 |  | 0.00 |
| October 2018 | 9,256,557.24 |  | 0.00 |
| November 2018 | 9,071,553.72 |  | 0.00 |
| December 2018 | 8,889,943.82 |  | 0.00 |
| January 2019 | 8,711,668.01 |  | 0.00 |
| February 2019 | 8,536,667.75 |  | 0.00 |
| March 2019 | 8,364,885.51 |  | 0.00 |
| April 2019 | 8,196,264.74 |  | 0.00 |
| May 2019 | 8,030,749.87 |  | 0.00 |
| June 2019 | 7,868,286.27 |  | 0.00 |
| July 2019 | 7,708,820.25 |  | 0.00 |
| August 2019. | 7,552,299.03 |  | 0.00 |
| September 2019 | 7,398,670.77 |  | 0.00 |
| October 2019 | 7,247,884.47 |  | 0.00 |
| November 2019 | 7,099,890.04 |  | 0.00 |
| December 2019 | 6,954,638.23 |  | 0.00 |
| January 2020 | 6,812,080.65 |  | 0.00 |
| February 2020 | 6,672,169.73 |  | 0.00 |
| March 2020 | 6,534,858.72 |  | 0.00 |
| April 2020 | 6,400,101.68 |  | 0.00 |
| May 2020 | 6,267,853.44 |  | 0.00 |
| June 2020 | 6,138,069.63 |  | 0.00 |
| July 2020 | 6,010,706.63 |  | 0.00 |
| August 2020. | 5,885,721.57 |  | 0.00 |
| September 2020 | 5,763,072.31 |  | 0.00 |
| October 2020 | 5,642,717.46 |  | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ (in the aggregate) |  |
| :---: | :---: | :---: | :---: |
| November 2020 | \$ 5,524,616.31 | \$ | 0.00 |
| December 2020 | 5,408,728.88 |  | 0.00 |
| January 2021 | 5,295,015.86 |  | 0.00 |
| February 2021 | 5,183,438.62 |  | 0.00 |
| March 2021 | 5,073,959.21 |  | 0.00 |
| April 2021 | 4,966,540.31 |  | 0.00 |
| May 2021 | 4,861,145.27 |  | 0.00 |
| June 2021 | 4,757,738.04 |  | 0.00 |
| July 2021 | 4,656,283.23 |  | 0.00 |
| August 2021 | 4,556,746.02 |  | 0.00 |
| September 2021 | 4,459,092.23 |  | 0.00 |
| October 2021 | 4,363,288.25 |  | 0.00 |
| November 2021 | 4,269,301.05 |  | 0.00 |
| December 2021 | 4,177,098.18 |  | 0.00 |
| January 2022 | 4,086,647.73 |  | 0.00 |
| February 2022 | 3,997,918.37 |  | 0.00 |
| March 2022 | 3,910,879.30 |  | 0.00 |
| April 2022 | 3,825,500.25 |  | 0.00 |
| May 2022 | 3,741,751.47 |  | 0.00 |
| June 2022 | 3,659,603.74 |  | 0.00 |
| July 2022 | 3,579,028.33 |  | 0.00 |
| August 2022 | 3,499,997.03 |  | 0.00 |
| September 2022 | 3,422,482.08 |  | 0.00 |
| October 2022 | 3,346,456.25 |  | 0.00 |
| November 2022 | 3,271,892.74 |  | 0.00 |
| December 2022 | 3,198,765.25 |  | 0.00 |
| January 2023 | 3,127,047.91 |  | 0.00 |
| February 2023 | 3,056,715.31 |  | 0.00 |
| March 2023 | 2,987,742.48 |  | 0.00 |
| April 2023 | 2,920,104.89 |  | 0.00 |
| May 2023 | 2,853,778.43 |  | 0.00 |
| June 2023 | 2,788,739.41 |  | 0.00 |
| July 2023 | 2,724,964.55 |  | 0.00 |
| August 2023. | 2,662,430.98 |  | 0.00 |
| September 2023 | 2,601,116.23 |  | 0.00 |
| October 2023 | 2,540,998.21 |  | 0.00 |
| November 2023 | 2,482,055.23 |  | 0.00 |
| December 2023 | 2,424,265.96 |  | 0.00 |
| January 2024 | 2,367,609.47 |  | 0.00 |
| February 2024 | 2,312,065.17 |  | 0.00 |
| March 2024 | 2,257,612.84 |  | 0.00 |
| April 2024 | 2,204,232.60 |  | 0.00 |
| May 2024 | 2,151,904.94 |  | 0.00 |
| June 2024. | 2,100,610.67 |  | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) | Classes TG, TH and TJ <br> (in the aggregate) |  |
| :---: | :---: | :---: | :---: |
| July 2024 | \$ 2,050,330.95 | \$ | 0.00 |
| August 2024 | 2,001,047.26 |  | 0.00 |
| September 2024 | 1,952,741.42 |  | 0.00 |
| October 2024 | 1,905,395.54 |  | 0.00 |
| November 2024 | 1,858,992.06 |  | 0.00 |
| December 2024 | 1,813,513.75 |  | 0.00 |
| January 2025 | 1,768,943.63 |  | 0.00 |
| February 2025 | 1,725,265.07 |  | 0.00 |
| March 2025 | 1,682,461.69 |  | 0.00 |
| April 2025 | 1,640,517.43 |  | 0.00 |
| May 2025 | 1,599,416.49 |  | 0.00 |
| June 2025 | 1,559,143.36 |  | 0.00 |
| July 2025 | 1,519,682.80 |  | 0.00 |
| August 2025. | 1,481,019.84 |  | 0.00 |
| September 2025 | 1,443,139.75 |  | 0.00 |
| October 2025 | 1,406,028.11 |  | 0.00 |
| November 2025 | 1,369,670.69 |  | 0.00 |
| December 2025 | 1,334,053.57 |  | 0.00 |
| January 2026 | 1,299,163.04 |  | 0.00 |
| February 2026 | 1,264,985.64 |  | 0.00 |
| March 2026 | 1,231,508.14 |  | 0.00 |
| April 2026 | 1,198,717.56 |  | 0.00 |
| May 2026 | 1,166,601.15 |  | 0.00 |
| June 2026 | 1,135,146.36 |  | 0.00 |
| July 2026 | 1,104,340.88 |  | 0.00 |
| August 2026. | 1,074,172.63 |  | 0.00 |
| September 2026 | 1,044,629.72 |  | 0.00 |
| October 2026 | 1,015,700.48 |  | 0.00 |
| November 2026 | 987,373.44 |  | 0.00 |
| December 2026 | 959,637.35 |  | 0.00 |
| January 2027 | 932,481.15 |  | 0.00 |
| February 2027 | 905,893.97 |  | 0.00 |
| March 2027 | 879,865.14 |  | 0.00 |
| April 2027 | 854,384.18 |  | 0.00 |
| May 2027 | 829,440.79 |  | 0.00 |
| June 2027 | 805,024.87 |  | 0.00 |
| July 2027 | 781,126.47 |  | 0.00 |
| August 2027. | 757,735.84 |  | 0.00 |
| September 2027 | 734,843.41 |  | 0.00 |
| October 2027 | 712,439.75 |  | 0.00 |
| November 2027 | 690,515.63 |  | 0.00 |
| December 2027 | 669,061.97 |  | 0.00 |
| January 2028 | 648,069.84 |  | 0.00 |
| February 2028 | 627,530.50 |  | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) |  | Classes TG, TH and TJ <br> (in the aggregate) |  |
| :---: | :---: | :---: | :---: | :---: |
| March 2028 | \$ | 607,435.34 | \$ | 0.00 |
| April 2028 |  | 587,775.91 |  | 0.00 |
| May 2028 |  | 568,543.92 |  | 0.00 |
| June 2028. |  | 549,731.22 |  | 0.00 |
| July 2028 |  | 531,329.81 |  | 0.00 |
| August 2028. |  | 513,331.84 |  | 0.00 |
| September 2028 |  | 495,729.57 |  | 0.00 |
| October 2028 |  | 478,515.44 |  | 0.00 |
| November 2028 |  | 461,682.01 |  | 0.00 |
| December 2028 |  | 445,221.95 |  | 0.00 |
| January 2029 |  | 429,128.11 |  | 0.00 |
| February 2029 |  | 413,393.42 |  | 0.00 |
| March 2029 |  | 398,010.96 |  | 0.00 |
| April 2029 |  | 382,973.95 |  | 0.00 |
| May 2029 |  | 368,275.70 |  | 0.00 |
| June 2029 |  | 353,909.66 |  | 0.00 |
| July 2029 |  | 339,869.40 |  | 0.00 |
| August 2029. |  | 326,148.59 |  | 0.00 |
| September 2029 |  | 312,741.04 |  | 0.00 |
| October 2029 |  | 299,640.64 |  | 0.00 |
| November 2029 |  | 286,841.42 |  | 0.00 |
| December 2029 |  | 274,337.50 |  | 0.00 |
| January 2030 |  | 262,123.11 |  | 0.00 |
| February 2030 |  | 250,192.60 |  | 0.00 |
| March 2030 |  | 238,540.39 |  | 0.00 |
| April 2030 |  | 227,161.03 |  | 0.00 |
| May 2030 |  | 216,049.17 |  | 0.00 |
| June 2030 |  | 205,199.53 |  | 0.00 |
| July 2030 |  | 194,606.95 |  | 0.00 |
| August 2030. |  | 184,266.36 |  | 0.00 |
| September 2030 |  | 174,172.77 |  | 0.00 |
| October 2030 |  | 164,321.31 |  | 0.00 |
| November 2030 |  | 154,707.16 |  | 0.00 |
| December 2030 |  | 145,325.62 |  | 0.00 |
| January 2031 |  | 136,172.05 |  | 0.00 |
| February 2031 |  | 127,241.92 |  | 0.00 |
| March 2031 |  | 118,530.78 |  | 0.00 |
| April 2031 |  | 110,034.23 |  | 0.00 |
| May 2031 |  | 101,747.99 |  | 0.00 |
| June 2031 |  | 93,667.84 |  | 0.00 |
| July 2031 |  | 85,789.64 |  | 0.00 |
| August 2031. |  | 78,109.32 |  | 0.00 |
| September 2031 |  | 70,622.89 |  | 0.00 |
| October 2031 . . |  | 63,326.45 |  | 0.00 |


| Distribution Date | Classes PA and PZ <br> (in the aggregate) |  | Classes TG, TH and TJ <br> (in the aggregate) |  |
| :---: | :---: | :---: | :---: | :---: |
| November 2031 | \$ | 56,216.14 | \$ | 0.00 |
| December 2031 |  | 49,288.19 |  | 0.00 |
| January 2032 |  | 42,538.91 |  | 0.00 |
| February 2032 |  | 35,964.65 |  | 0.00 |
| March 2032 |  | 29,561.85 |  | 0.00 |
| April 2032 |  | 23,327.00 |  | 0.00 |
| May 2032 |  | 17,256.68 |  | 0.00 |
| June 2032 |  | 11,347.51 |  | 0.00 |
| July 2032 |  | 5,596.17 |  | 0.00 |
| 2032 |  | 0.00 |  | 0.00 |


$\$ 587,501,397$

Government National
Mortgage Association

# GINNIE MAE ${ }^{\circledR}$ 

Guaranteed REMIC
Pass-Through Securities
Ginnie Mae REMIC Trust 2002-78

OFFERING CIRCULAR SUPPLEMENT November 21, 2002
$\qquad$

MORGAN STANLEY
BLAYLOCK \& PARTNERS, L.P.


[^0]:    * The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

[^1]:    * The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.
    ** Indicates that investors will suffer a loss of virtually all of their investment.

