



Fannie Mae

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# **Fannie Mae Investor Reporting Manual**

**October 13, 2021**



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## Preface

This *Investor Reporting Manual* (Manual) outlines Fannie Mae's requirements for the mortgage loan accounting system it uses for reporting on the status of one- to four-unit mortgage loans either held in its portfolio or pooled in an MBS. (The Fannie Mae investor reporting system is also used for multifamily mortgage loans that are in MBS pools). This Manual is incorporated into the *Servicing Guide* by reference. In the event that the *Manual* and the *Servicing Guide* are conflicting, the servicer must follow the requirements set forth in the *Servicing Guide*.

## Content Organization

This Manual is organized into the following chapters:

- Chapter 1: General Requirements
- Chapter 2: Reporting Payment Transactions
- Chapter 3: Reporting Non-Payment Transactions
- Chapter 4: Special Loan Handling
- Chapter 5: Formulas and Calculations

To learn more about the details on the content included in a chapter, see the Table of Contents.

## Effective Dates for the Manual

Each topic within the Manual is followed by a date shown in parentheses. With the publication of the new Manual, this date will represent the date of the most recent Servicing Announcement that amended content within an individual topic. The servicer must refer to the individual Announcement to locate the policy effective date.

## Access Options

The Manual is available on AllRegs and in Adobe® PDF format on Fannie Mae's website. Related Announcements, Lender Letters, and Notices may be obtained through a variety of mediums, including:

- using a free electronic version on the AllRegs website through a link from Fannie Mae's website;
- a subscription paid directly to AllRegs for an enhanced electronic version with additional features and a higher degree of functionality (than the free version); and
- in PDF format on Fannie Mae's website.



## Amendments to the Manual

Fannie Mae may at any time alter or waive any of the requirements of this Manual, impose other additional requirements, or rescind or amend any and all material set forth in this Manual. The servicer must ensure that its staff is thoroughly familiar with the content and requirements of the Manual as it now exists and as it may be changed.

## Notification of Changes and Manual Updates

Fannie Mae notifies servicers of changes and updates to its Manual policies and procedures, as communicated in Announcements, Lender Letters, and Notices, in two ways:

- posting the documents on Fannie Mae’s website and the AllRegs website, and
- emailing notification of those postings to servicers that subscribe to Fannie Mae’s email subscription service and select the option “Servicing News.”

## Forms, Exhibits, and Content Incorporated by Reference

The Manual provides information about the specific forms servicers must use to fulfill Fannie Mae’s requirements. Servicers can access the actual forms on Fannie Mae’s website.

Some materials are only referenced in the Manual and are posted in their entirety on Fannie Mae’s website. All forms and exhibits – whether it currently exists or is subsequently created – referenced in the Manual now or later are legally a part of this Manual, the *Servicing Guide* and Fannie Mae’s contract with its servicers.

## Technical Issues

In the event of technical difficulties or system failures with Fannie Mae’s website, the delivery of the “Servicing News” option of Fannie Mae’s email subscription service, or the AllRegs website, users may contact the following resources:

- For Fannie Mae’s website and Fannie Mae’s email subscription service, use the “Contact Us” link on the website to ask questions or obtain more information or contact Fannie Mae’s Single-Family Technology Support at 1-800-2FANNIE (1-800-232-6643).
- For the AllRegs website, submit an email support request from the website or contact AllRegs Customer Service at 1-800-848-4904.

## When Questions Arise

The Manual provides information about normal and routine investor reporting matters. Servicers must address questions relevant to a particular situation not covered in the Manual to its Fannie Mae Investor Reporting Representative.



## Chapter 1, General Requirements

The Fannie Mae investor reporting system is an integrated investor reporting system used to capture loan-level detail for all regularly amortizing mortgage loans serviced for Fannie Mae. Although all of these mortgage loans are accounted for under a single reporting system, Fannie Mae's investor reporting system separates mortgage loans by remittance type to ensure the servicer can easily recognize and account for procedural or policy differences.

### 1-01, Using Machine-Processable Input (01/18/2017)

The servicer must use an automated format to report all loan-level transactions. This includes reporting corrections to erroneous transactions previously reported to the Fannie Mae investor reporting system. The electronic transmission of Fannie Mae's investor reporting system reports can be accomplished by:

- Business-to-Business (B2B) electronic file transfer, or
- Fannie Mae's SURF™, a web application that is available for reporting the different types of transactions.

Access to SURF is available on Fannie Mae's website.

Fannie Mae also accepts a common format for the electronic data interchange (EDI) of investor reporting information. The action that a servicer must take to ensure it satisfies Fannie Mae's requirements for using the EDI format will vary depending on how it submits its Fannie Mae investor reporting system reports to Fannie Mae, as shown in the following table.

If the servicer...	Then the servicer must...
submits its monthly loan-level Fannie Mae investor reporting system reports through SURF or through electronic file transfer	have its own EDI translation software or translation services to convert its flat files to the ANSI X12 format.
uses a service bureau to transmit its monthly Fannie Mae investor reporting system reports	confirm that its service bureau will have the appropriate translation software in place before the servicer begins reporting under the ANSI X12 format.

Fannie Mae addresses its investor reporting system requirements in terms of the transaction types and data element identification that is part of the Fannie Mae investor reporting system record. To assist in converting this information into EDI references, see [Exhibit 6: Mapping Fannie Mae Investor Reporting System Records to EDI Investor Reporting Trans Set 203](#).



## 1-02, Performing Monthly Reconciliations (07/15/2020)

Each month, the servicer must reconcile the Fannie Mae investor reporting system records it receives from Fannie Mae to its internal records. Further instructions for the monthly reconciliation process are provided in the following table.

Loan Type	The servicer must...
Portfolio mortgage loans with an actual/actual remittance type	<ul style="list-style-type: none"><li>• Compare loan-level balances, LPI dates, interest rates, and pass-through rates carried in the servicer's records to those that Fannie Mae has in its investor reporting system database; and</li><li>• Reconcile the components of any shortage or surplus that exists due to remittance differences between Fannie Mae records and the servicer's loan-level reports.</li></ul>
<ul style="list-style-type: none"><li>• MBS mortgage loans with a scheduled/scheduled remittance type, and</li><li>• portfolio mortgage loans with a scheduled/scheduled or scheduled/actual remittance type</li></ul>	Compare loan-level balances, LPI dates, interest rates, and pass-through rates in the servicer's records to those in Fannie Mae's records.

### Submitting Formal Reconciliations

Reconciliations must be prepared using the following forms (or an acceptable equivalent format):

- *Schedule 1 - Reconciliation of Mortgage Portfolio* ([Form 473](#)),
- *Schedule 2 - Reconciliation of Interest Rate/Pass-Through Rate* ([Form 473A](#)), and
- *Schedule 3 - Reconciliation of Shortage/Surplus* ([Form 472](#))
- *Reconciliation of Mortgage Portfolio—S/S MBS and MRS* ([Form 512](#)).

### Handling Unreconciled Shortages and Surpluses

A shortage or surplus in the Fannie Mae investor reporting system represents the cumulative difference between:

- the cash the servicer remitted to Fannie Mae, and
- the interest and principal the servicer reflected in its monthly loan-level reports as being applied to the portfolio mortgage loans serviced for Fannie Mae.





Unreconciled shortages are payable to Fannie Mae. The following table provides the servicer with instructions for the reconciliation of a shortage.

✓	<b>The servicer must...</b>
	Remit the amount of the unreconciled shortage to Fannie Mae immediately.
	Contact its Fannie Mae Investor Reporting Representative (see <a href="#">Servicing Guide F-4-03, List of Contacts</a> ) for instructions on handling subsequent adjustments and corrections, before transmitting its Fannie Mae investor reporting system transactions for the next reporting period.

Unreconciled surpluses are income items for Fannie Mae. The following table provides additional information to the servicer regarding surpluses.

If the servicer...	And the servicer...	Then Fannie Mae...
is unable to reconcile the surplus within 90 days after it first appears on its Fannie Mae investor reporting system report	cannot explain any extenuating circumstances related to the unreconciled surplus	may adjust the servicer's shortage/surplus account to zero out the surplus.  <i>Note: Fannie Mae will give the servicer advance notification and advise it on how subsequent adjustments and corrections must be handled.</i>

Fannie Mae produces reports to assist the servicer in reconciling information generated from the Fannie Mae investor reporting system with its internal records. To ensure the accuracy of Fannie Mae's records, the servicer must reconcile the records reflected in the reports Fannie Mae generates to its internal records. Occasionally, Fannie Mae may ask the servicer to submit these reconciliations to Fannie Mae. For additional support or information on Fannie Mae-generated reports, servicers may contact their Investor Reporting Representative (see [Servicing Guide F-4-03, List of Contacts](#)).

## Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2020-03</a>	July 15, 2020

## 1-03, Requesting Audit Confirmations (11/12/2014)

A servicer may instruct its external auditors to contact Fannie Mae directly about providing confirmation of the servicer's portfolio composition and outstanding balances as they are carried in Fannie Mae's records. Fannie Mae will respond to such requests as promptly as possible although there can be a delay of up to one month. The request for audit confirmation must be sent to: [Investor\\_Reporting\\_Group\\_Mailbox@FannieMae.com](mailto:Investor_Reporting_Group_Mailbox@FannieMae.com).



All requests for audit confirmations must include the information shown in the following table.

✓	<b>Requirements for Audit Confirmation Requests</b>
	The servicer's name and address.
	An authorized signature of an officer of the financial institution.
	The servicer's 9-digit Fannie Mae lender identification number.
	The name and telephone number of the auditor's contact person (either with the servicer's institution or auditor).
	The effective date for the confirmation.



## Chapter 2, Reporting Payment Transactions

A payment transaction is required for all summary reporting mortgage loans each month **regardless** of whether a payment is received or not. A payment transaction for detailed reporting mortgage loans is only required when a payment is received.

### 2-01, Reporting Due Dates (01/18/2017)

#### Reporting Due Dates for Summary Reporting Mortgage Loans

For summary reporting mortgage loans, the servicer is required to submit a monthly Loan Activity Record or (LAR) by 8 p.m. eastern time on the twenty-second calendar day of the month of the reporting period. The reports are due on the preceding business day if the twenty-second calendar day falls on a weekend or holiday. This due date is termed the “Interim Reporting End Date.” A LAR must be reported regardless of whether payment was received from the borrower. Corrections to reported activity and any additional activity that occurs from the Interim Reporting End Date through the end of the reporting period must be submitted by 8 p.m. eastern time on the first business day of the month following the reporting period.

**Note:** *The servicer is authorized to submit loan activity daily as the activity occurs. Activity recorded by Fannie Mae is not cumulative; the last LAR processed successfully is the activity recorded.*

The following example illustrates the reporting requirement. The published Investor Reporting and Remitting Calendar posted on Fannie Mae’s website details the dates for every month.

**Example:** *For the June 2017 reporting period, the servicer must report all payment or no payment activity that occurred between June 1 and June 21 and transmit the transaction types that reflect this activity in time to reach Fannie Mae by June 22 (interim reporting end date). The servicer must report all activity that occurred between June 22 and June 30 and transmit the transaction types that reflect this activity in time to reach Fannie Mae by July 3 – BD1 (July 1 and 2 are weekend days).*

The servicer is required to submit removal transactions (i.e. payoffs, repurchases, foreclosures, short sales, deeds-in-lieu, and third party sales) by 8 p.m. eastern time on the first business day after the servicer processes the removal transaction on their system, when that business day is not the second business day of the month following the reporting period. If that business day is the second business day of the month, following the reporting period, the removal transaction must be submitted to Fannie Mae by 5 p.m. eastern time. Removal transaction corrections must be submitted in time to reach Fannie Mae by 5 p.m. eastern time on the second business day of the month following the reporting period in which the activity occurred.

**Note:** *Bulk submission of transactions cannot be performed via B2B electronic file transfer or through SURF™ upload function after 3 p.m. eastern time on the second business day of the month.*

#### Reporting Due Dates for Detailed Reporting Mortgage Loans

For detailed reporting mortgage loans, the servicer is required to submit the payment activity as it is received from the borrower. Both a LAR 96 and a LAR 97 must be submitted in accordance with the timing outlined in *Reporting Due Dates for Summary Reporting Mortgage Loans*.



## 2-02, Reporting a Transaction Type 96 (Loan Activity Record) (01/18/2017)

The servicer must use Transaction Type 96 (LAR) to provide loan-level detail for each mortgage loan on the servicer's trial balance. The loan-level information can be broken down into three categories described in the following table.

Transaction Type 96 (LAR) Category	Description	Information that must be reported
Payment amount	Relates to the status of a borrower payment. The LAR should reflect receipt and application of the mortgage loan payment if the borrower made a full payment. If the borrower did not make a full payment, then a LAR must be reported to reflect non-receipt of the full payment.	The LPI date, UPB, and the remittance amount (distributed between interest and principal).
Mortgage loan activity type	Provides information about the activity that has occurred on the mortgage loan for the reporting time period – payment, payoff, repurchase, or other liquidation	<ul style="list-style-type: none"> <li>An action code—there are several codes available. See <a href="#">2-04, Reporting Specific Payment Transactions to Fannie Mae</a> for additional details.</li> <li>An action date to specify when the reported action occurred.</li> </ul>
Fee collection	Relates to any special fees—such as late charges, assumption fees, or prepayment premiums—that were collected from the borrower during the reporting period	The combined total of the special fees, if applicable.

Record specifications and additional descriptions for Transaction Type 96 are shown in the following table.

Data Element	Position(s)	Length	Description
Lender Number	1-9	(9)	Numeric
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 96
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric
LPI Date	24-27	(4)	Numeric; MMY format
UPB	28-38	(11)	Alphanumeric; S9(9)V99; zone signed; code \$50,000.01 as 0000500000A
Interest	39-49	(11)	Alphanumeric; S9(9)V99; zone signed; code \$800.02 as 0000008000B



Data Element	Position(s)	Length	Description
Principal	50-60	(11)	Alphanumeric; S9(9)V99; zone signed; code -\$9.91 as 0000000099J
Action Code	61-62	(2)	Numeric
Action Date	63-68	(6)	Numeric; MMDDYY format
Other Fees	69-76	(8)	Alphanumeric; S9(6)V99; zone signed; may be zero-filled
Filler	77-80	(4)	Alphanumeric; blanks or zeroes

The following table provides the zone signed mappings.

Zone Sign	Numeric Value	Zone Sign	Numeric Value
{	+0	}	-0
A	+1	J	-1
B	+2	K	-2
C	+3	L	-3
D	+4	M	-4
E	+5	N	-5
F	+6	O	-6
G	+7	P	-7
H	+8	Q	-8
I	+9	R	-9



## 2-03, Reporting a Transaction Type 97 (Extended Loan Activity Record) (01/18/2017)

Transaction Type 97 (Extended Loan Activity Record) is an extended LAR that includes the date of payment. This date must be included in reporting for all daily simple interest mortgage loans and actual/actual biweekly loans. This transaction must be reported in addition to a Transaction 96 for these mortgage loan types. The interest accrual is driven by the date of payment. Record specifications and descriptions for Transaction Type 97 are shown in the following table.

Data Element	Position	Length	Description
Lender Number	1-9	(9)	Numeric (Must be the Servicer Number assigned for DSI loans or actual/actual biweekly mortgage loans)
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 97
Reversal Flag	13	(1)	Numeric; Zero (0) - normal One (1) - reversal
Fannie Mae Loan Number	14-23	(10)	Numeric (The unique 10-digit Fannie Mae assigned loan number)
Gross Actual Payment	24-34	(11)	Numeric; 9(9)v99; Full payment amount sent by borrower (P&I). If reporting principal curtailment, this is the curtailment amount.
Payment Effective Date	35-42	(8)	Numeric; MMDDYYYY (Effective date the payment is being applied). Must equal reported LAR 96 action date, month and year.
Filler	43-72	(30)	Alphanumeric, blanks or zeroes
Full LPI Date	73-80	(8)	Numeric; MMDDYYYY Month and year must agree with the month and year reported in LAR 96 position 24 (LPI date).



## 2-04, Reporting Specific Payment Transactions to Fannie Mae (08/11/2021)

### Reporting a Payment, Principal Curtailment or No Payment

Each reporting period the servicer is required to inform Fannie Mae of any borrower payment activity (or no payment) that occurred for the Reporting Period. This information includes the Loan Activity Status, the Payment Collection Activity, and any Fees that were collected, if applicable. For all payment transactions that are not liquidations, the servicer must report the following for the Loan Activity Status:

- Action Code = either 00 for eighty character fixed width file format or 02 for ANSI X12 file format.
- Action Date = any date within the month of the Reporting Period for which the activity is to be applied (monthly reporting).

**Note:** When reporting an Action Code of 00 or 02, the Action Date Month and Year must be aligned to the Activity Period being reported.

In order to report the Payment Collection activity, the servicer must know the characteristics of the mortgage loan and how it was delivered to Fannie Mae. The calculation of P&I will vary depending on the remittance type and reporting method. The different calculation methods are explained below.

### Calculating Monthly Principal Payments

If the mortgage loan is...	To determine the principal remittance amount for a monthly payment mortgage loan, the servicer must...
actual/actual or a scheduled/actual remittance type	subtract the current month's actual UPB from the prior month's actual UPB and multiply the result by Fannie Mae's percentage interest.
scheduled/scheduled remittance type (regardless of whether it is a portfolio mortgage loan or an MBS mortgage loan)	subtract the current month's scheduled UPB from the prior month's scheduled UPB and multiply the result by Fannie Mae's percentage interest.

### Calculating Biweekly Principal Payments

If the mortgage loan is...	To determine the principal remittance amount for a biweekly mortgage loan, the servicer must...
a scheduled/actual biweekly mortgage loan	subtract the current month's actual UPB from the prior month's actual UPB and multiply the result by Fannie Mae's percentage interest.
an actual/actual biweekly mortgage loan	subtract the current actual UPB from the UPB as of the last reported loan activity and multiply the result by Fannie Mae's percentage interest.

### Calculating Monthly Interest Payments

Interest payments due to Fannie Mae each month for monthly payment mortgage loans vary depending on the remittance type of the mortgage loan. For an actual/actual remittance type mortgage loan, the servicer must



send Fannie Mae interest only if it is actually collected from the borrower. For a scheduled/actual or a scheduled/scheduled remittance type mortgage loan, the servicer must send Fannie Mae interest whether or not it is collected from the borrower. The calculations used for determining the amount of interest due are similar, except that the interest for a scheduled/scheduled remittance type mortgage loan will be based on a scheduled UPB since principal payments for that type of mortgage loan must be sent to Fannie Mae whether or not they are collected.

The following table provides further instructions to determine the interest payment for a monthly payment mortgage loan depending upon the mortgage loan remittance type.

<b>If the mortgage loan is...</b>	<b>Then the servicer must use this calculation...</b>
an actual/actual or a scheduled/actual remittance type	$(\text{Prior Month's Actual UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Pass-through Interest Remittance Amount}$
a scheduled/scheduled remittance type	$(\text{Prior Month's Scheduled UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Scheduled Interest Remittance Amount}$
actual/actual remittance type that is prepaid	$(\text{Prior Month's Actual UPB} \times \text{Pass-through Rate}) \div 12 \times (\text{number of months prepaid}) \times (\text{Fannie Mae's Percentage Interest}) = \text{Pass-through Interest Remittance Amount}$
is a scheduled/actual remittance type that is prepaid	$(\text{Prior Month's Actual UPB} \times \text{Pass-through Rate}) \div 12 \times (\text{Fannie Mae's Percentage Interest}) = \text{Pass-through Interest Remittance Amount.}$

**Note:** The receipt of a principal curtailment in a given month will not affect the interest calculation for that month. The servicer must compute interest for the current month based on the previous month's ending UPB (if the mortgage loan has an actual/actual or a scheduled/actual remittance type) or on the prior month's scheduled UPB (if the mortgage loan has a scheduled/scheduled remittance type).

### **Calculating Biweekly Interest Payments**

Interest payments related to scheduled/actual biweekly mortgage loans must be sent to Fannie Mae each month whether or not they are collected from the borrower. Interest payments related to actual/actual biweekly mortgage loans must be reported to Fannie Mae as received. Because biweekly mortgage loans in Fannie Mae's portfolio are accounted for as the scheduled/actual and actual/actual remittance types and those in MBS pools as the scheduled/scheduled remittance type, the calculations for determining the amount of interest due differ slightly (since the interest for an MBS mortgage loan is based on a scheduled UPB because the payments had to be sent to Fannie Mae even though they may not have been collected from the borrower).

The following table provides further instructions to determine the interest payment for a biweekly mortgage loan depending upon the mortgage loan remittance type.

<b>If the biweekly mortgage loan is...</b>	<b>Then the servicer must use this calculation...</b>
a scheduled/actual remittance type	$(\text{Prior Month's Actual UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Pass-through Interest Remittance Amount}$
an actual/actual remittance type	$(\text{Actual UPB} \times \text{Pass-through Rate}/365) \times 14 \text{ days} \times \text{Fannie Mae's Percentage Interest} = \text{Pass-through Interest Remittance Amount}^*$





If the biweekly mortgage loan is...	Then the servicer must use this calculation...
a scheduled/scheduled remittance type MBS mortgage loan	$(\text{Prior Month's Scheduled UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Scheduled Interest Remittance Amount}$

Interest on the regularly scheduled biweekly payment, which is reported separately from the principal curtailment, is calculated as described in the following table.

Step	Servicer Actions
1	Use the UPB prior to receipt of the principal curtailment and calculate interest up to but not including the date of the curtailment.
2	Use the UPB after the principal curtailment to calculate the remaining interest for the payment period.
3	Report the total interest calculated.

**Note:** Actual/actual biweekly loans are amortized every 14 days using a 365-day basis year for interest calculation.

### Calculating Actual UPB

The actual UPB of a mortgage loan in a given month is calculated the same way for all remittance or delivery types except actual/actual biweekly. To determine the current month's actual UPB of a mortgage loan except actual/actual biweekly, the servicer must use the following calculation:

	Previous Month's UPB
-	Current Month's Principal Collection
=	Current Month's UPB

To determine the current actual UPB of an actual/actual biweekly mortgage loan, the servicer must use this calculation:

	Previous reported UPB
-	Current principal collected
=	Current UPB

This current UPB must equal the UPB on the servicer's trial balance at the end of the activity month.

### Calculating Scheduled UPB

The servicer must calculate a scheduled UPB only for:

- monthly payment portfolio mortgage loans that are the scheduled/scheduled remittance type, and



- biweekly and monthly payment scheduled/scheduled remittance type mortgage loans that are in MBS pools.

The calculations are the same for both delivery types; however, they will differ depending on the due date of the mortgage loan installments and whether the mortgage loan payments are:

- current,
- delinquent, or
- prepaid.

**A. Monthly payments due on first day of month.** When a monthly payment mortgage loan has payments due on the first day of each month, the scheduled UPB is generally equal to the actual UPB of the mortgage loan amortized to one month beyond the reporting period. The different calculation methods are explained in the following table.

If the mortgage loan is...	The servicer must calculate the ending scheduled UPB as follows:
current	<ol style="list-style-type: none"> <li>1. <math>(\text{Ending Actual UPB} \times \text{Note Rate}) \div 12 = \text{Gross Interest Amount}</math></li> <li>2. <math>\text{Monthly Installment} - \text{Gross Interest Amount} = \text{Principal}</math></li> <li>3. <math>\text{Ending Actual UPB} - \text{Principal} = \text{Ending Scheduled UPB}</math></li> </ol>
delinquent	<ol style="list-style-type: none"> <li>1. Repeat steps 1 – 3 shown above for each month the mortgage loan is delinquent, then</li> <li>2. Add the additional month required to take the amortization one month beyond the reporting period.</li> </ol>
prepaid for one month	No calculation is necessary. The scheduled UPB is equal to the actual UPB.
prepaid two or more months	<ol style="list-style-type: none"> <li>1. <math>\text{Ending Actual UPB} + \text{Monthly Installment} = \text{Adjusted UPB}</math></li> <li>2. <math>\text{Interest Rate} \div 12 = \text{Interest Factor (to 9 decimal places)}</math></li> <li>3. <math>\text{Adjusted UPB} \div (1 + \text{Interest Factor}) = \text{Scheduled UPB}</math></li> </ol> <p><b>Note:</b> These steps must be repeated for each prepaid installment (beyond one) that needs to be “reversed amortized.”</p>

**B. Monthly payments due on any other day of the month.** When a monthly payment mortgage loan has payments due on any day other than the first day of each month, the scheduled UPB will differ based on the mortgage loan status. The different calculation methods are explained in the following table.

If the mortgage loan is...	The servicer must calculate the ending scheduled UPB as follows:
Current	No calculation is necessary. The scheduled UPB is equal to the actual UPB.



If the mortgage loan is...	The servicer must calculate the ending scheduled UPB as follows:
delinquent	<ol style="list-style-type: none"> <li>1. <math>(\text{Ending Actual UPB} \times \text{Note Rate}) \div 12 = \text{Gross Interest Amount}</math></li> <li>2. <math>\text{Monthly Installment} - \text{Gross Interest Amount} = \text{Principal}</math></li> <li>3. <math>\text{Ending Actual UPB} - \text{Principal} = \text{Ending Scheduled UPB}</math></li> </ol> <p><b>Note:</b> These steps must be repeated for each delinquent installment that needs to be amortized to bring the balance to the correct scheduled UPB for the reporting period.</p>
Prepaid	<ol style="list-style-type: none"> <li>1. <math>\text{Ending Actual UPB} + \text{Monthly Installment} = \text{Adjusted UPB}</math></li> <li>2. <math>\text{Interest Rate} \div 12 = \text{Interest Factor (to 9 decimal places)}</math></li> <li>3. <math>\text{Adjusted UPB} \div (1 + \text{Interest Factor}) = \text{Scheduled UPB}</math></li> </ol> <p><b>Note:</b> These steps must be repeated for each prepaid installment that needs to be “reverse amortized.”</p>

**C. Biweekly payments.** When a mortgage loan provides for biweekly payments, the scheduled UPB is equal to the actual UPB after all biweekly payments due on or before the first day of the month following the reporting month are credited (whether or not they were actually collected).

**D. Calculations Related to Daily Simple Interest Loans.** Interest accrues daily (based upon a 365-day year) up to but not including the date a payment is received that reduces principal. Then, starting on the date the principal was reduced, interest accrues on the new balance. The following example provides an illustration of the calculation the servicer must complete.

**Example:**

- Balance as of March 5 (and assuming interest is fully satisfied to this date): \$10,000.00
- Payment of \$500.00 received on March 24 (effective date = March 24 with interest accrued through March 23)
- Interest rate = 5.5%

Fannie Mae's system will calculate interest on \$10,000.00 for 19 days (March 5 to March 24) @ 5.5%.

$$10,000.00 \times 0.055/365 \times 19 = 28.63$$

\$28.63 would be applied to interest and \$471.37 would go to principal, bringing the new UPB to \$9,528.63.

Starting on **March 24**, Fannie Mae's system would calculate interest on the new UPB, **\$9,528.63**.

When a payment is made by the borrower, the servicer must satisfy accrued interest first, then principal with the payment effective, driving the interest calculation.

## Reporting a Payoff to Fannie Mae

Upon receiving P&I that will satisfy the outstanding UPB of the mortgage loan, the servicer must submit a LAR with an Action Code 60 on the first business day after the servicer processes the transaction on its system.



## ***Calculating the Principal Balance Paid Off***

The amount of principal paid when a borrower pays off his or her mortgage loan is the same regardless of the remittance or delivery type of the mortgage loan. However, the principal payment to Fannie Mae will differ depending on whether the servicer is required to send Fannie Mae:

- actual principal collections, or
- scheduled principal reductions.

The different calculation methods are explained in the following table.

<b>If the mortgage loan is...</b>	<b>To determine the principal balance paid off, the servicer must...</b>
an actual/actual (except actual/actual biweekly) or scheduled/actual remittance type	multiply the prior month's actual UPB by Fannie Mae's percentage interest.
a scheduled/scheduled remittance type (regardless of whether it is a portfolio mortgage loan or an MBS mortgage loan)	multiply the prior month's scheduled UPB by Fannie Mae's percentage interest.
an actual/actual biweekly mortgage loan	multiply the actual UPB, as of the last reported loan activity, by Fannie Mae's percentage interest

**Note:** *If the mortgage loan has principal forbearance, the servicer must add the forbearance amount to the UPB before multiplying by Fannie Mae's percentage interest.*

## ***Calculating Interest Paid Off***

The amount of interest collected when a borrower pays off his or her mortgage loan is determined by:

- the type of mortgage loan, and
- the date of the payoff.

The interest due Fannie Mae, however, also will differ depending on the remittance type of the mortgage loan.



The various calculation methods for mortgage loans that are actual/actual remittance type are shown in the following table.

If the mortgage loan is actual/actual remittance type and...	Then the servicer must compute interest...
<p>a VA, RD, FHA Title I, FHA mortgage loans closed on or after 1/21/2015, or conventional first- or second lien mortgage loan</p>	<p>from the LPI date up to, but not including, the date the payoff funds are received, using this calculation:</p> <ul style="list-style-type: none"> <li>• <math>(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 12 = \text{One Month's Interest}</math></li> <li>• <math>(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 365 = \text{One Day's Interest}</math></li> <li>• <math>\text{One Month's Interest} \times \text{Number of Full Months of Interest Due (if mortgage loan is delinquent)} = \text{Accrued Monthly Interest Due}</math></li> <li>• <math>\text{One Day's Interest} \times \text{Number of Days of Partial Month of Interest Due} = \text{Accrued Daily Interest Due}</math></li> <li>• <math>(\text{Accrued Monthly Interest Due} + \text{Accrued Daily Interest Due}) \times \text{Fannie Mae's Percentage Interest} = \text{Total Payoff Interest}</math></li> </ul>
<p>an FHA mortgage loan or HUD-guaranteed Section 184 mortgage loan</p>	<p>from the LPI due date up to the date of payoff (if the funds are received on an installment due date) or through the end of the month due date (if the funds are received after an installment due date), using this calculation:</p> <ul style="list-style-type: none"> <li>• <math>(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 12 = \text{One Month's Interest}</math></li> <li>• <math>(\text{One Month's Interest} \times \text{Number of Full Months of Interest Due}) \times \text{Fannie Mae's Percentage Interest} = \text{Total Payoff Interest}</math></li> </ul> <p><b>Note:</b> When the installment due date of an FHA mortgage loan falls on a non-work day, the receipt of the payoff funds shall be considered received on the installment due date if received on the next working day.</p>

**Note:** A full month of interest will be based on a 360-day year, while a partial month's interest will be based on a 365-day year.

For mortgage loans that are scheduled/actual remittance type and for mortgage loans that are scheduled/scheduled remittance type, the type of mortgage loan and the date of the payoff has no effect on the interest due Fannie Mae. The calculations to be used for scheduled/actual and scheduled/scheduled remittance types are shown in the following table.



If the mortgage loan is...	Then Fannie Mae is due...
scheduled/actual remittance type	<p>one-half of one month's interest, this servicer must calculate this amount as follows:</p> $(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 24 \times \text{Fannie Mae's Percentage Interest} = \text{Payoff Interest}$ <p><b>Note:</b> The interest calculation for FHA Title I loans that are the scheduled/actual remittance type is the same as the calculation for FHA Title I loans that are the actual/actual remittance type (as discussed in the preceding table).</p>
scheduled/scheduled remittance type	<p>one full month's interest, the servicer must calculate this amount as follows:</p> $(\text{Prior Month's Scheduled UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Scheduled Payoff Interest}$ <p>(also see <a href="#">Servicing Guide C-3-02, Remitting Payoff Proceeds</a>.)</p>

## Reporting a Repurchase

As outlined in the *Servicing Guide*, Fannie Mae must approve a mortgage loan to be repurchased. Once approved, the servicer must adhere to the following guidelines when submitting the repurchase LAR transaction.

Action Code	The servicer must report this Action Code ...	With an Action Date
65	In the next Transaction Type 96 it transmits to Fannie Mae through Fannie Mae's investor reporting system	that is within the current activity period.
67	Repurchasing an ARM loan where the modification feature is being exercised	that is within the current activity period.

## Calculating the Principal to Repurchase

Mortgage loans sold to Fannie Mae as cash purchases may have been purchased at par, at a discount or at a premium price. Mortgage loans sold to Fannie Mae as part of a SWAP MBS pool are purchased at par. When determining the principal that needs to be repurchased, the price of the mortgage loan will need to be considered. The following table explains how to calculate the principal to report on the LAR Transaction Code 96.

If the mortgage loan is...	To determine the principal to be repurchased, the servicer must...
an actual/actual (excluding biweekly) or a scheduled/actual remittance type portfolio mortgage loan (sold as cash)	<ul style="list-style-type: none"> <li>multiply the prior month's actual UPB by the original purchase price, then</li> <li>multiply the result by Fannie Mae's percentage interest.</li> </ul>



If the mortgage loan is...	To determine the principal to be repurchased, the servicer must...
a scheduled/scheduled remittance type portfolio mortgage loan (sold as cash)	<ul style="list-style-type: none"> <li>multiply the prior month's scheduled UPB by the original purchase price, then</li> <li>multiply the result by Fannie Mae's percentage interest.</li> </ul>
an actual/actual biweekly mortgage loan	<ul style="list-style-type: none"> <li>multiply the UPB as of the last reported loan activity, by the original purchase price, then</li> <li>multiply the result by Fannie Mae's percentage interest.</li> </ul>
a scheduled/scheduled remittance type loan sold into SWAP MBS security	<ul style="list-style-type: none"> <li>multiply the prior month's scheduled UPB by Fannie Mae's percentage interest.</li> </ul>
an actual/actual remittance type loan that was reclassified from a SWAP MBS security	<ul style="list-style-type: none"> <li>multiply the prior month's actual UPB by Fannie Mae's percentage interest.</li> </ul>

**Note:** If the mortgage loan has principal forbearance, the servicer must add the forbearance amount to the UPB before multiplying by the purchase price and/or Fannie Mae's percentage interest.

### Calculating Interest Repurchased

When an actual/actual remittance type mortgage loan is repurchased, Fannie Mae is due interest from the LPI date up to, but not including, the repurchase date. However, when a scheduled/actual or a scheduled/scheduled remittance type mortgage loan is repurchased, Fannie Mae is due a full month of interest in all cases. A full month of interest will be based on a 360-day year, while a partial month's interest will be based on a 365-day year. The following table provides additional instructions for calculating the repurchase interest due Fannie Mae based on the remittance type of the mortgage loan.

If the mortgage loan is...	Then the servicer must calculate repurchase interest as follows...
an actual/actual remittance type	<ul style="list-style-type: none"> <li><math>(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 12 = \text{One Month's Interest}</math></li> <li><math>(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 365 = \text{One Day's Interest}</math></li> <li><math>\text{One Month's Interest} \times \text{Number of Full Months of Interest Due (if mortgage loan is delinquent)} = \text{Accrued Monthly Interest Due}</math></li> <li><math>\text{One Day's Interest} \times \text{Number of Days of Partial Month of Interest Due} = \text{Accrued Daily Interest Due}</math></li> <li><math>(\text{Accrued Monthly Interest Due} + \text{Accrued Daily Interest Due}) \times \text{Fannie Mae's Percentage Interest} = \text{Total Repurchase Interest}</math></li> </ul>
a scheduled/actual remittance type	$(\text{Prior Month's UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Ownership} = \text{Repurchase Interest}$
a scheduled/scheduled remittance type portfolio or MBS mortgage loan	$(\text{Prior Month's Scheduled UPB} \times \text{Pass-through Rate}) \div 12 \times \text{Fannie Mae's Percentage Interest} = \text{Scheduled Repurchase Interest}$



## Reporting a Mortgage Loan Liquidation to Fannie Mae

A loan liquidation is classified as an event that removes the mortgage loan from the Fannie Mae investor reporting system without full payment. Actions included in this category are Foreclosure Sales, a Mortgage Release, Third Party Sale, Short Sale, etc. The Action Codes and related descriptions are provided in the following table.

Action Code	The servicer must report this Action Code for...
70	<p>Charge-off/Liquidated Held for Sale for Uninsured Properties:</p> <ul style="list-style-type: none"> <li>including those in redemption,</li> <li>acquired through a Mortgage Release, or</li> <li>for a VA No Upset case.</li> </ul> <p><b>Note:</b> The servicer must transmit a Transaction Type 96 LAR to Fannie Mae if the servicer repurchases an acquired property after it submits an REOgram™ to Fannie Mae.</p> <p><b>Note:</b> The servicer must not report an action code that reflects “repurchase” or “payoff” since the liquidation actually relates to the disposition of the property that was “held for sale.” The servicer also must report the repurchase proceeds as “special remittance.”</p>
71	<p>Liquidated Third-Party Sale / Condemnation / Short Sale, including when:</p> <ul style="list-style-type: none"> <li>a third-party purchaser has acquired the property,</li> <li>a condemnation of the property has occurred,</li> <li>a short sale has been completed, or</li> <li>Fannie Mae authorized the charge-off of the second-lien mortgage debt.</li> </ul>
72	<p>Charge-off/Liquidated – Foreclosure Sale Held for Insured Properties:</p> <ul style="list-style-type: none"> <li>including those in redemption, or</li> <li>for a property acquired through a Mortgage Release pending conveyance to FHA/VA/MI.</li> </ul>

**Note:** Upon completion of a foreclosure and acceptance of the foreclosure LAR, Fannie Mae will reimburse the servicer for advanced P&I for scheduled/scheduled remittance type mortgage loans for which Fannie Mae bears the foreclosure loss risk or those which are shared risk with Fannie Mae responsible for marketing the property.

## Calculating the Principal to Liquidate the Mortgage Loan

The amount of principal required to be reported to Fannie Mae to effectively pay off the mortgage loan varies based on the remittance type of the mortgage loan. The different calculation methods are explained in the following table.

If the mortgage loan is...	The principal amount to report to liquidate the loan is...
an actual/actual (except actual/actual biweekly) or scheduled/actual remittance type	the prior month’s actual UPB multiplied by Fannie Mae’s percentage interest.
a scheduled/scheduled remittance type	the prior month’s scheduled UPB multiplied by Fannie Mae’s percentage interest.





If the mortgage loan is...	The principal amount to report to liquidate the loan is...
an actual/actual biweekly mortgage loan	the prior month's actual UPB, as of the last reported loan activity multiplied by Fannie Mae's percentage interest.

**Note:** For an actual/actual, scheduled/actual or an actual/actual biweekly remittance type loan, if there is movement in the Loan's LPI date or Actual UPB, the change in the UPB will need to be accounted for in the principal amount to be reported.

Also, if the mortgage loan has principal forbearance, the servicer must add the forbearance amount to the UPB before multiplying by the purchase price and/or Fannie Mae's percentage interest.

### Calculating the Interest to Liquidate the Mortgage Loan

The amount of interest the servicer must report when a mortgage loan is liquidated is also dependent upon the remittance type of the mortgage loan. The calculation method used to determine the amount of interest to report is shown in the following table.

If the mortgage loan is...	The principal amount to report to liquidate the loan is...
an actual/actual remittance type (excludes biweekly loans)	No LPI Movement <ul style="list-style-type: none"> <li>• \$0.00</li> </ul> Forward LPI Movement <ul style="list-style-type: none"> <li>• Sum of the (Prior period Actual UPB x Pass-through Rate) / 12 for the number of payment made times Fannie Mae's Percentage Interest</li> </ul> Backward LPI Movement <ul style="list-style-type: none"> <li>• Sum of the (Prior period Actual UPB x Pass-through Rate) / 12 for the number of payment made times Fannie Mae's Percentage Interest times (-1)</li> </ul>
an actual/actual biweekly mortgage loan	No LPI Movement <ul style="list-style-type: none"> <li>• \$0.00</li> </ul> Forward LPI Movement <ul style="list-style-type: none"> <li>• Sum of the (Prior period Actual UPB x Pass-through Rate) / 24 for the number of payment made times Fannie Mae's Percentage Interest</li> </ul> Backward LPI Movement <ul style="list-style-type: none"> <li>• Sum of the (Prior period Actual UPB x Pass-through Rate) / 24 for the number of payment made times Fannie Mae's Percentage Interest times (-1)</li> </ul>



If the mortgage loan is...	The principal amount to report to liquidate the loan is...
a scheduled/actual remittance type	<p>Advancing</p> <ul style="list-style-type: none"> <li>The prior month's scheduled UPB multiplied by Fannie Mae's percentage interest times the Lender Pass Through Rate / 12</li> </ul> <p>Recovering</p> <ul style="list-style-type: none"> <li>If there is no LPI movement, then interest amount to report is = the Total Advanced Interest multiplied by (-1).</li> <li>With forward LPI movement, then (prior scheduled UPB multiplied by Fannie Mae's percentage interest times the Lender Pass Through Rate / 12) times the number of periods from the prior LPI date to the reported LPI date</li> <li>With backward LPI movement, then ((total advanced interest plus (prior scheduled UPB multiplied by Fannie Mae's percentage interest times the Lender Pass Through Rate / 12) times the number of periods from the prior LPI date to the Reported LPI date) times (-1).</li> </ul> <p>Not advancing</p> <ul style="list-style-type: none"> <li>Regardless of LPI movement, then interest amount is = (prior actual UPB * Lender Pass Through Rate / 12) times (-1)</li> </ul>
a scheduled/scheduled remittance type	The prior month's scheduled UPB multiplied by Fannie Mae's percentage interest times the Lender Pass Through Rate / 12.

## Recovering Advanced Interest on a Liquidated Delinquent Scheduled/Actual Mortgage Loan

For scheduled/actual remittances, the servicer must pass through one more months' worth of interest than the number of delinquent installments.

The servicer must pass through to Fannie Mae:

- one month's interest for the reporting period that includes the LPI date for the mortgage loan, and
- one month's interest for each successive month of delinquency.

For delinquent mortgage loans, the servicer is authorized to recover its advances for delinquent interest during the fourth month of delinquency. To recover this interest advance, the servicer must report a negative interest remittance amount for the mortgage loan when reporting the Transaction Type 96 LAR for the month in which the mortgage loan becomes four months delinquent. This amount represents the first three months of advanced interest. Fannie Mae will reimburse the servicer for the additional month of interest it advances



(fourth month) after the servicer reports the loan liquidation (as Action Code 70, 71, or 72) with Transaction Type 96 (Summary Loans) or Transaction Type 96 and 97 (Detailed Reporting Loans) LAR.

The following table illustrates the correct timing for reporting delinquencies, advancing interest, and recovering advanced interest for an S/A whole mortgage loan or a participation pool mortgage loan (other than one that was part of a concurrent mortgage loan sale) that had an LPI date of April 2017:

Mortgage LPI	Reporting Period					
	Date: April 2017	April 2017	May 2017	June 2017	July 2017	August 2017
Mortgage Status	Current	1 mo. Delq.	2 mo. Delq.	3 mo. Delq.	4 mo. Delq.	
Interest Sent to Fannie Mae	1 mo.	1 mo.	1 mo.	1 mo.	1 mo.	-3 mos.*
		Delinquent Interest Advanced for 3 Months				Interest Recovery

**Note:** The remaining one month of interest will be paid to servicer after it reports the liquidation of the mortgage loan.

### Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2021-05</a>	August 11, 2021
<a href="#">Announcement SVC-2018-01</a>	February 14, 2018

## Chapter 3, Reporting Non-Payment Transactions

In addition to Payment Transactions, the servicer is required to update Fannie Mae's records with other mortgage loan information. These reportable non-payment transactions include:

- Transaction Type 32 (Servicing Transfer Record),
- Transaction Type 81 (Lender Loan I.D. Change Record),
- Transaction Type 82 (Loan Address Change Record),
- Transaction Type 83 (Payment/Rate Change Record), and
- Transaction Type 89 (Discontinuance of Mortgage Insurance).



## 3-01, Reporting a Transaction Type 32 (Servicing Transfer Record) (10/13/2021)

A servicer that has received approval for transfer of servicing must transmit loan-level information for the mortgage loans that will be included in the transfer to the Fannie Mae investor reporting system. The following table provides additional instructions regarding these transactions.

✓	<b>The servicer must...</b>
	Complete a <i>Request for Approval of Servicing or Subservicing Transfer</i> ( <a href="#">Form 629</a> ) and email it to the Regional Office at least 60 days prior to the Effective Date.  <b>Note:</b> <a href="#">Form 629</a> is only required for external transfers where the first five digits are different and it does not impact a sub-servicer transfer.
	Finalize the transfer request by the 25 <sup>th</sup> calendar day of the month prior to the transfer effective date.
	Use Transaction Type 32 (Servicing Transfer Record) to provide this information.
	Submit this loan-level information in time for Fannie Mae to receive it no later than 15 days before the effective date of the transfer; although it may be submitted as early as six months before the proposed effective date.

Record specifications and descriptions for Transaction Type 32 are shown in the following table.

Data Element	Position(s)	Length	Description
Transferor Lender Number	1-9	(9)	Numeric
Blank	10	(1)	Alphanumeric; blank
Record Identifier	11-12	(2)	Numeric; Always 32
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric; Fannie Mae loan number
Request Effective Date	24-29	(6)	Numeric; CCYYMM format; for a transfer that is effective January 31, 2003, use 200301
Transferee Lender Number	30-38	(9)	Numeric
Lender Loan I.D.	39-53	(15)	Alphanumeric
Transfer Request Type Code	54-55	(2)	Numeric; as detailed below: 00 – Non-MBS Loan 10 – MBS Loan



## Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2021-07</a>	October 13, 2021

## 3-02, Reporting a Transaction Type 80 (Subservicer Arrangement Record) (02/15/2017)

This topic has been deleted.

## 3-03, Reporting a Transaction Type 81 (Lender Loan I.D. Change Record) (01/18/2017)

Transaction Type 81 (Lender Loan I.D. Change Record) must be used to add, delete, or change the information Fannie Mae is carrying in its records for the servicer's unique identifier for the mortgage loan. The servicer can determine the I.D. that Fannie Mae is carrying in its records by reviewing the trial balance report that Fannie Mae provides. (See *Detailed Reporting Trial Balance Report (DRTB) Job Aid*, which is available on Fannie Mae's website.) Record specifications and descriptions for Transaction Type 81 are shown in the following table.

Data Element	Position(s)	Length	Description
Lender Number	1-9	(9)	Numeric
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 81
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric
New Lender Loan I.D.	24-38	(15)	Alphanumeric
Filler	39-80	(42)	Alphanumeric; Blanks

## 3-04, Reporting a Transaction Type 82 (Loan Address Change Record) (01/18/2017)

Transaction Type 82 (Loan Address Change Record) must be used to update Fannie Mae's records to reflect changes or corrections to a property address. Changes that must be reported include:

- the renumbering or renaming of streets,



- changing an address from a lot and block description to a house number and street, and
- changing ZIP codes because of postal realignments.

Record specifications and descriptions for Transaction Type 82 are shown in the following table.

Data Element	Position(s)	Length	Description
Lender Number	1-9	(9)	Numeric
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 82
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric
New Street	24-55	(32)	Alphanumeric; combination of house or building number, street type (La = Lane, Ave = Avenue, etc.), street direction (NE, NW, SE, SW), and unit number, if applicable.
City	56-70	(15)	Alphabetic; truncate if necessary
Zip Code	71-75	(5)	Numeric
Blank	76-80	(5)	Alphanumeric; Blanks

### 3-05, Reporting a Transaction Type 83 (Payment/Interest Rate Change Record) (01/18/2017)

The Transaction Type 83 is used to update Fannie Mae's loan records of changes to the rate and/or payment for a mortgage loan. Changes to the rate or payment that must be reported include:

- Scheduled Interest Rate Change/Payment Changes
- Scheduled Interest Rate Changes Only
- Scheduled Payment Changes Only
- ARM to Fixed Rate Loan Conversions
- Borrower Requested Payment Recast (excludes I/O loans in Interest Only period)

The following table provides a list of servicer requirements for reporting Transaction Type 83 (Trans 83).

If the loan has a...	The servicer must...
Scheduled Interest Rate Change / Payment Change	Report the Transaction Type 83 to Fannie Mae prior to 8 PM eastern standard time on the 5 <sup>th</sup> Business Day after the Scheduled Interest Rate Calculation Date (Rate Effective Date minus the Look Back Period).



If the loan has a...	The servicer must...
Scheduled Interest Rate Change Only	Report the Transaction Type 83 to Fannie Mae prior to 8 PM eastern standard time on the 5 <sup>th</sup> Business Day after the Scheduled Interest Rate Calculation Date (Rate Effective Date minus the Look Back Period).
Scheduled Payment Change Only	Report the Transaction Type 83 to Fannie Mae prior to 8 PM eastern standard time on the 5 <sup>th</sup> Business Day after the Scheduled Payment Calculation Date
ARM to Fixed Conversion	Report a Transaction Type 83 for the conversion by no later than the due date of the Fannie Mae investor reporting system reports for the reporting period that includes the effective date for the new monthly payment, but may report the Transaction Type 83 to Fannie Mae when it transmits its first Fannie Mae investor reporting system reports after it knows the effective date of the conversion and the new converted interest rate and monthly payment.
Unscheduled Interest Rate/Payment Change	Use the Transaction Type 83 to report any unscheduled change event for a loan, including: <ul style="list-style-type: none"> <li>a change to the loan's P&amp;I due to a principal curtailment made by the borrower, or</li> <li>a change to the loan's interest rate and P&amp;I due to the borrower's qualifying for an interest rate reduction (such as a Timely Payment Reward loan).</li> </ul>

Record specifications and descriptions for Transaction Type 83 are included in the following table.

Data Element	Position(s)	Length	Description
Lender Number	1-9	(9)	Numeric
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 83
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric
Effective with Payment Due on	24-27	(4)	Numeric; MMY format
Index Value	28-33	(6)	Alphanumeric; 99v9999; Index Value or blank; code 6.5% as 065000
New Interest Rate	34-39	(6)	Alphanumeric; 99v9999; Interest Rate or blank; code 8.25% as 082500
Pass-Through Rate	40-45	(6)	Alphanumeric; 99v9999; Pass-Through Rate or blank; code 7.25% as 072500
New Payment	46-54	(9)	Alphanumeric; New Payment Amount or blank; code \$700.25 as 000070025



Data Element	Position(s)	Length	Description
Extended Term	55-57	(3)	Alphanumeric; Extended Term or blank
Converted to Fixed Rate	58	(1)	Alphanumeric; Uppercase Y if converted; otherwise blank
Filler	59-80	(22)	Alphanumeric; Blanks

### 3-06, Reporting a Transaction 89 (Discontinuance of Mortgage Insurance) (01/18/2017)

The servicer must notify Fannie Mae about an automatic termination or a borrower-initiated cancellation of mortgage insurance coverage via a Transaction Type 89. The termination or cancellation must be reported by the last reporting day of the reporting period in which the effective date of the termination occurs.

The reason for the MI Discontinuance is distinguished by action codes. The proper action code that must be reported differs based on whether the MI is automatically terminated or is canceled based on the borrower's request to do so.

Action codes are further described in the following table.

Action Code	The servicer must use this code...
51	to report a borrower-initiated cancellation based on the original value of the property (or, in the case of a second-lien mortgage loan, the value of the property at the time the second-lien mortgage loan was originated)
52	to report a borrower-initiated cancellation based on the current appraised value of the property
53	to report an automatic termination (regardless of whether the termination is based on the scheduled LTV ratio or the date that is the mid-point of the amortization period).
54	to report termination due to high risk.

Record specifications and descriptions for Transaction Type 89 are included in the following table.

Data Element	Position(s)	Length	Description
Lender Number	1-9	(9)	Numeric
Investor	10	(1)	Alphanumeric; Always F = Fannie Mae
Record Identifier	11-12	(2)	Numeric; Always 89
Source Code	13	(1)	Numeric; Always zero (0)
Fannie Mae Loan Number	14-23	(10)	Numeric
Action Code	24-25	(2)	Numeric





<b>Data Element</b>	<b>Position(s)</b>	<b>Length</b>	<b>Description</b>
Action Date	26-31	(6)	Numeric; MMDDYY format
Filler	32-80	(49)	Alphanumeric; Blanks or zeroes



## Chapter 4, Special Loan Handling

### 4-01, Reporting a Mortgage Loan Eligible for a Payment Deferral (06/09/2021)

Loan activity reporting must continue on a delinquent mortgage loan that is subject to a payment deferral. If the mortgage loan is in an MBS pool, then the servicer must not request a reclassification.

The final “pre-payment deferral” UPB and LPI values in Fannie Mae’s servicing solutions system must match the last reported UPB and LPI in Fannie Mae’s investor reporting system. If the values do not match, this will cause an exception in Fannie Mae’s servicing solutions system and the payment deferral case cannot close until this discrepancy is resolved.

In Fannie Mae’s investor reporting system, the servicer must report a payment LAR with the UPB and a delinquent LPI Date equal to or less than two months. This payment LAR must be reported in the evaluation month, or the processing month if applicable, at least one business day prior to the last day of such calendar month. Failure to do so will result in the payment deferral not being processed in Fannie Mae’s servicing solutions system.

**NOTE:** For a disaster payment deferral, reporting a payment LAR with LPI and UPB movement is only required during the month of the solicitation of if the servicer has chosen to use a processing month and as of the date of the evaluation the mortgage loan is 12 months delinquent. In this instance, the borrower must make his or her full monthly contractual payment during the evaluation month or processing month, as applicable, and the servicer must report the payment LAR at least one business day prior to the last day of such calendar month. Failure to do so will result in the disaster payment deferral not being processed in Fannie Mae’s servicing solutions system.

The following table provides additional instructions based on what is processed in the current reporting month prior to acceptance of the payment deferral in Fannie Mae’s investor reporting system.

If...	Then...
no LAR or a LAR without LPI and UPB movement is processed by CD22 in the current reporting month prior to the payment deferral’s acceptance	the servicer must report a subsequent LAR with LPI and UPB movement reflecting the “pre- payment deferral” activity. The payment LAR must be reported at least one business day prior to the last day of the calendar month.  <b>NOTE:</b> Specific to disaster payment deferral, the above is only applicable in instances where a full monthly contractual payment is required in the evaluation or processing month.
a LAR with LPI and UPB movement was successfully processed and the payment deferral is accepted in the current reporting month	any subsequent LAR received in the same reporting month will be deemed “Invalid” and will be reflected as such in the Loan Activity Summary Report. A detailed list can be obtained from your Investor Reporting analyst.



If...	Then...
	<p><b>NOTE:</b> <i>The first LAR that Fannie Mae will accept after the payment deferral terms are reflected in the Fannie Mae’s investor reporting system will be in the next reporting month.</i></p>

### Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2021-03</a>	June 9, 2021
<a href="#">Announcement SVC-2020-07</a>	December 9, 2020

## 4-02, Reporting a Mortgage Loan After a Payment Deferral (08/11/2021)

A payment deferral creates a non-interest bearing balance (referred to in this *Manual* as “principal forbearance”), due and payable at the maturity of the mortgage loan, or earlier upon the sale or transfer of the property, refinance of the mortgage loan, or payoff of the interest-bearing UPB. The servicer must not calculate interest on the principal forbearance amount.

In the reporting month following the acceptance of a payment deferral, the servicer must report the mortgage loan’s

- net UPB (gross UPB minus the principal portion of the payment deferral amount) in the “Actual UPB” field on the LAR if there is no LPI movement; or
- amortized UPB based on the net UPB (gross UPB minus the principal portion of the payment deferral amount) in the “Actual UPB” field on the LAR if there is LPI movement.

**NOTE:** *The initial reduction in UPB caused by the principal forbearance must not be reported to Fannie Mae as a principal curtailment.*

The following table provides additional instructions related to reporting requirements for mortgage loans that were subject to a payment deferral and have an outstanding principal forbearance at the time of a principal curtailment, a payoff, or a repurchase.



If...	Then...
a principal curtailment is received	<ul style="list-style-type: none"> <li>• if the principal curtailment being applied is less than the interest-bearing UPB, the servicer must apply such curtailment to the interest-bearing UPB.</li> <li>• if the principal curtailment is greater than or equal to the interest-bearing UPB, then the servicer must apply such curtailment in the following order:               <ol style="list-style-type: none"> <li>1. to the principal forbearance, if any; and</li> <li>2. to the interest-bearing UPB.</li> </ol> </li> </ul>
a payoff or a repurchase is received	<p>the servicer must include the principal forbearance amount when reporting the principal remittance amount.</p> <p><b>NOTE:</b> <i>Principal forbearance reported on the liquidation LAR consists of the deferred principal amount, the gross interest amount and any prior principal forbearance on the mortgage loan. For a disaster payment deferral, the principal forbearance reported on the liquidation LAR must also include advanced escrow and servicing advances as applicable.</i></p> <p><b>NOTE:</b> <i>Attempting to report a payoff or a repurchase without including the principal forbearance amount will generate an exception (hard reject) upon submission of the LAR.</i></p> <p><b>NOTE:</b> <i>Servicing fees, guaranty fees, and excess servicing fees (if applicable), will be reimbursed when the loan matures or the payoff LAR has been accepted in Fannie Mae's investor reporting system.</i></p>

**NOTE:** *Generally, servicer P&I advances will be reimbursed within three to four business days after a payment deferral has been accepted in Fannie Mae's investor reporting system.*



## Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2021-05</a>	August 11, 2021
<a href="#">Announcement SVC-2020-07</a>	December 9, 2020

## 4-03, Reporting a Mortgage Loan After Modification (08/15/2018)

Loan activity reporting must continue on a delinquent loan that is being modified. If, in the final month of the trial period, the sum of unapplied trial period payments is equal to or greater than a full contractual payment on the underlying mortgage loan, and the mortgage loan modification is closed in the same month, the servicer must report the contractual payment before the post-modification balances can be reported. This will require two LARs and two reporting cycles to complete.

The final pre-modification UPB and final pre-modification LPI values in Fannie Mae's servicing solutions system must match the last reported UPB and LPI in Fannie Mae's investor reporting system. If the values do not match this will cause an exception in Fannie Mae's servicing solutions system and the case cannot close until this discrepancy is resolved.

In the reporting period that Fannie Mae's servicing solutions system successfully reports the final modification to Fannie Mae's investor reporting system, the servicer must report a LAR. The following table provides additional instructions based on what is processed in the current reporting month prior to acceptance of the Delinquency Modification.

If...	Then...
a LAR with LPI and UPB movement was processed in the current reporting month prior to the Delinquency Modification's acceptance	the first LAR that Fannie Mae will accept will be in the next reporting month.
a LAR without LPI or UPB movement, or No LAR is processed, in the current reporting month prior to the Delinquency Modification's acceptance	a LAR with after modification activity can be reported in the current reporting month.
any additional LARs are received after a LAR with LPI and UPB movement was processed in the current reporting month prior to the Delinquency Modification's acceptance	the additional LARs will be deemed "Invalid" and be reflected as such in the Loan Activity Summary Report. A detailed list can be obtained from your Investor Reporting Analyst.

**Note:** This is applicable to Bankruptcy Cramdowns as well.



The servicer must report the modification of any mortgage loan in the first delinquency status information it transmits to Fannie Mae after Fannie Mae approves the mortgage loan modification. Existing monthly LAR reporting requirements for Fannie Mae servicers apply for a mortgage loan that has been modified.

The following table provides additional instructions related to special reporting requirements for loan modifications that include a principal forbearance.

If a mortgage loan modification includes...	Then the servicer must...
a principal forbearance	<ul style="list-style-type: none"> <li>• report the net UPB (full UPB minus the forbearance amount) in the “Actual UPB” field in the LAR for the reporting month that the mortgage loan modification becomes effective, and</li> <li>• report interest on the LAR based on the net UPB.</li> </ul> <p><b>Note:</b> The initial reduction in UPB caused by the principal forbearance must <u>not</u> be reported to Fannie Mae as a principal curtailment.</p>
a principal forbearance resulting in a balloon payment due upon the borrower's sale of the property or payoff, or maturity of the mortgage loan	<ul style="list-style-type: none"> <li>• include the principal forbearance amount when reporting principal on the LAR, when reporting a payoff or repurchase of the mortgage loan, but</li> <li>• never compute interest on the principal forbearance amount, including at the time of liquidation.</li> </ul> <p><b>Note:</b> Attempting to report a payoff or repurchase without including the principal forbearance amount will generate an exception (hard reject) upon submission of the LAR.</p>
a principal forbearance for which a principal curtailment is received	<ul style="list-style-type: none"> <li>• apply such principal curtailment to the interest-bearing UPB, if the curtailment is less than the interest-bearing UPB.</li> <li>• apply such principal curtailment in the following order if the curtailment is greater than or equal to the interest-bearing UPB:               <ol style="list-style-type: none"> <li>1. to the principal forbearance, if any; and</li> <li>2. to the interest-bearing UPB.</li> </ol> </li> </ul>

## 4-04, Reporting a Mortgage Loan After Reclassification (01/18/2017)

If Fannie Mae reclassifies a delinquent scheduled/scheduled remittance type special servicing option MBS mortgage loan as an actual/actual remittance type mortgage loan that Fannie Mae will hold in its portfolio, Fannie Mae will reimburse the servicer its delinquency advances for scheduled P&I once Fannie Mae completes the reclassification.

With the exclusion of PFP mortgage loans with a scheduled/scheduled remittance type, MBS mortgage loans (regular and special servicing option mortgage loans) removed from MBS pools in this manner will become actual/actual remittance type mortgage loans that Fannie Mae will hold in its portfolio, identifying them by

- the Fannie Mae loan number,
- the servicer’s loan number, and



- the property address.

The servicer must adjust the remittance type in their systems to actual/actual and report a LAR reflecting the loan as actual/actual before the interim reporting end date. If a valid A/A LAR has not been processed by the interim reporting end date, the Loan Activity Rejects report will show an exception of “Missing LAR – Loan Reclass” in the first report produced for the day.

PFP mortgage loans with an original scheduled/scheduled remittance type will remain a scheduled/scheduled remittance type even after being removed from the pool. The servicer does not need to report a LAR after the reclassification unless the servicer has not reported a LAR for the reporting period.

## 4-05, Reporting During the First Reporting Cycle for “Same Month” MBS Mortgage Loans (01/18/2017)

When a mortgage loan in an MBS pool is closed in the same month that the pool is issued, the borrower does not owe the servicer a monthly payment until after the servicer's first monthly remittance must be made to Fannie Mae. Therefore, the servicer must use its own funds to advance the interest that is scheduled to be passed through to Fannie Mae for the mortgage loan in that month and to make the first guaranty fee remittance. The interest advance represents one month's interest, calculated on the issue date principal balance of the mortgage loan and using either:

- the pass-through rate for the pool (for a fixed-rate mortgage loan),
- the pool accrual rate (for an ARM in a stated-structure pool), or
- the accrual rate for the mortgage loan (for an ARM in a weighted-average structure ARM Flex® pool).

The servicer's first remittance for a mortgage loan submitted for “same month” pooling will be an interest-only remittance, unless the borrower sends the servicer a principal curtailment before the first payment is due on the mortgage loan. This means that the servicer must not report a scheduled principal reduction.

The following table provides additional scenarios and Fannie Mae's requirements for each of those scenarios associated with “same month” MBS mortgage loans.

If the servicer...	Then...
reports a regular scheduled principal payment for one of these mortgage loans for the first reporting cycle	the transaction will “hard reject.”
receives a principal curtailment for one of these mortgage loans	the servicer must reduce the actual mortgage loan balance by the amount of the principal curtailment as well as report the curtailment in the Principal Remittance.
receives a prepaid installment for one of these mortgage loans during the month the MBS pool is issued, but after the pool was delivered to Fannie Mae	the servicer must report the reduced mortgage loan balance to Fannie Mae as the “actual UPB” but not report any principal remittance.  <b>Note:</b> Not reporting a Principal Remittance on this LAR ensures that the Scheduled UPB will continue to equal the issue date balance.



The following chart illustrates how a servicer would report a Transaction Type 96 (Loan Activity Record) for its December reports (for mortgage loans in a pool that had a November issue date) to reflect the application for a current mortgage loan (one for which no payment has come due), a prepaid mortgage loan, and a current mortgage loan that has had a \$100 principal curtailment applied.

Loan Identification	LPI Date	Actual Unpaid Balance	Interest Remitted	Principal Remitted
Current	January 2017	\$100,000.00	\$1,000.00	—
Prepaid	February 2017	\$99,980.00	\$1,000.00	—
Curtail	January 2017	\$99,900.00	\$1,000.00	\$100.00

## 4-06, Reporting Military Indulgence to Fannie Mae (11/12/2014)

In order to facilitate the servicer in taking appropriate action in cases where military indulgence is warranted or required, the servicer must follow the procedures in [Servicing Guide, F-1-19, Processing Military Indulgence](#), which provides a consolidated presentation of all of the relevant material on Fannie Mae's specific procedures for providing relief to U.S. servicemembers under the Servicemembers Civil Relief Act and its additional forbearance policies.

## 4-07, Reporting a Seriously Delinquent Mortgage Loan as Current (01/18/2017)

When a whole mortgage loan or any other participation pool mortgage loan that is more than three months' delinquent is brought current (fully reinstated) before the foreclosure sale is held, the servicer will have been reimbursed for a portion of its interest advances. Therefore, the servicer must make appropriate adjustments to ensure that Fannie Mae receives all of the monthly interest payments that it is due. If an interest adjustment date occurs while an ARM is delinquent, the servicer must consider any changes to the pass-through rate for the mortgage loan when calculating the amount of interest due Fannie Mae. The formulas for determining the interest remittance appear in the following table.

<b>A</b>	Interest Recovery (For FRMs and Unadjusted ARMs)	
	•	Previously Reported UPB x Pass-through Rate ÷ 12
	x	Fannie Mae's Percentage Interest
	x	Number of Months that have elapsed from the Previously Reported LPI Date through the end of the Reporting Period
	=	Interest Amount Required to Bring Mortgage Current
<b>B</b>	Interest Recovery (For Adjusted ARMs)	
	•	Previously Reported UPB x Pass-through Rate ÷ 12
	x	Fannie Mae's Percentage Interest





	x	Number of Months that have elapsed from the Previously Reported LPI Date until the LPI Date that the New Pass-through Rate becomes effective.
	=	Interest Amount to be Remitted at Previous Pass-through Rate
	•	Previously Reported UPB x New Pass-through Rate ÷ 12
	x	Fannie Mae's Percentage Interest
	x	Number of Months that have elapsed from the LPI Date that the New Pass-through Rate became effective through the end of the Reporting Period
	=	Interest Amount to be Remitted at New Pass-through Rate
	•	Interest Amount to be Remitted at Previous Pass-through Rate
	+	Interest Amount to be Remitted at New Pass-through Rate
	=	Total Interest Amount Required to Bring Mortgage Current

To bring a seriously delinquent mortgage loan current under Fannie Mae's investor reporting system, the servicer must report the interest remittance with its Transaction Type 96 (Summary Loans) or Transaction Type 96 and 97 (Detailed Reporting Loans) LAR as interest from the previously reported LPI date through the end of the reporting period. The following table illustrates the relationship between the mortgage loan status, the interest due, and the interest remitted.

Mortgage LPI	Reporting Period						
	Date April 2017	April 2017	May 2017	June 2017	July 2017	August 2017	Sept. 2017
Mortgage Status	Current	1 mo. Delq.	2 mo. Delq.	3 mo. Delq.	4 mo. Delq.	Current	
Interest Due Fannie Mae	1 mo.	1 mo.	1 mo.	1 mo.	1 mo.	1 mo.	1 mo.
Interest Remittance	1 mo.*	1 mo.	1 mo.	1 mo.	(-3 mos.)	5 mo.	
			3 mos.	+	1 mo.	+	1 mo.

In the preceding example, the interest due Fannie Mae covers:

- the three months that the servicer has already recovered,
- the one month that the servicer has not recovered,
- interest for the month when the servicer reimbursed itself, and
- interest due for the reporting period.

Since the servicer has not recovered interest advanced for one of the months, it must only remit five months of interest to Fannie Mae.



If the interest adjustment date for an ARM occurs during the delinquency period, the servicer must calculate the amount of interest due to Fannie Mae when the mortgage loan is brought current in two steps, as shown in the following table.

Step	Servicer Actions
1	Using the earlier pass-through rate.
2	Using the new pass-through rate that results from the interest rate adjustment.

**Note:** A new pass-through rate goes into effect for reporting purposes in the month that the monthly payment changes for the mortgage loan. Other than that, the interest remittance must be determined as previously described.

In the preceding example, if the effective date for the interest adjustment is June 2017; the servicer must calculate:

- two of the five months of interest due Fannie Mae at the previous pass-through rate, and
- three months of interest at the new pass-through rate.

## 4-08, Reporting When an Error Occurs After the Reporting Period Ends (01/18/2017)

### Reporting an Error for a Removal Transaction

The servicer must not change either the action code or action date through the regular investor reporting process if a payoff, repurchase or liquidation error is discovered after the final transactions for the reporting period have been transmitted to Fannie Mae.

The servicer must report these errors to either its Fannie Mae Investor Reporting Representative or through Fannie Mae's SF CPM division (or both), depending on the nature of the change (see [Servicing Guide F-4-03, List of Contacts](#)).

The removal of an MBS mortgage loan from an MBS pool cannot be reversed. However, the servicer may send a written explanation to its Fannie Mae Servicing Representative (see [Servicing Guide F-4-03, List of Contacts](#)) that provides the reason for the removal. At Fannie Mae's sole discretion, the mortgage loan may be held as a portfolio mortgage loan.

To inform Fannie Mae of a change an action date for an Action Code 60, 65, or 67, the servicer must submit written notice and justification for the change to its Fannie Mae Investor Reporting Representative (see [Servicing Guide F-4-03, List of Contacts](#)).

The following table provides additional information on requirements for changing the action code.

If the original action code was...	And the new action code is...	Then the servicer must...
a 70 or 72	71	notify Fannie Mae's SF CPM division to cancel any REOgram notice that was submitted previously.



If the original action code was...	And the new action code is...	Then the servicer must...
a 71	a 70 or 72	submit an REOgram to notify Fannie Mae's SF CPM division about the property acquisition.

## Reporting an Error for an ARM Loan

In accordance with [Servicing Guide C-2.2-01, Identifying and Disclosing Adjustment Errors](#) the servicer must verify all previous interest rate and payment adjustments were correctly handled for a mortgage loan before it corrects an identified adjustment error. Once the servicer verifies the correct interest rate or monthly payment for each adjustment date that has occurred, it must re-amortize the mortgage loan from the date of the first erroneous adjustment through the date the LPI was applied to determine whether the borrower has been overcharged or undercharged. The servicer must follow the procedures in *Re-Amortizing the Mortgage Loan* in [Servicing Guide F-1-01, Servicing ARM Loans](#) to complete the re-amortization.

The servicer must determine whether the borrower's monthly payment needs to be changed as a result of any ARM adjustment error. If the net effect of correcting an adjustment error is an undercharge, it cannot be collected from the borrower, nor can the UPB of the mortgage loan be changed to offset it.

The servicer must provide the following information to its Fannie Mae Investor Reporting Representative (see [Servicing Guide F-4-03, List of Contacts](#)) to support a request for a correction of any ARM adjustment error:

- a brief cover letter that explains the exact nature of the error, and
- supporting documentation for the proposed corrective action (such as copies of the servicer's ARM audit analysis for the mortgage loan, the mortgage note and ARM rider, payment history records, corrected amortization schedules, the lender's negotiated contract, purchase advices etc.).

See also [Servicing Guide F-4-03, List of Contacts](#) for additional information. After the servicer confirms ARM adjustment error(s) and has re-amortized the mortgage loan, the servicer must correct the error(s) in its and Fannie Mae's records.

## Correcting Interest Rate and Payment Change Errors for an ARM Loan

When an ARM adjustment error involves an interest rate and payment change error and the error results in the use of a lower interest rate (and related monthly payment, if applicable):

- the mortgage loan amortizes at a faster pace, and
- the UPB is lower than it would have been from the amortization of the borrower's actual payment at the correct, higher interest rate.

Since Fannie Mae has decided that the borrower will not be required to make up undercharges, the servicer must not change the mortgage loan balance in Fannie Mae's investor reporting system records even though too little of the borrower's payment would have been applied to interest and too much to principal. The following table provides additional information depending on mortgage loan type.



<b>If the interest rate and payment change error pertains to...</b>	<b>Then...</b>
a portfolio mortgage loan with an actual/actual remittance type	Fannie Mae will treat the over-application of principal as a principal curtailment that was previously applied and will either <ul style="list-style-type: none"> <li>• adjust the servicer's shortage/surplus account to reflect the servicer's under-remittance of interest,</li> <li>• or advise the servicer to increase its next remittance by the amount of additional interest due Fannie Mae.</li> </ul>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	Fannie Mae will adjust the loan level draft by the amount of additional interest due or the servicer's under-remittance of interest.
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	The servicer's principal over-remittance cannot be recovered from the security holder—even though the security balance will be lower than it should have been—since the over-remittance will have been considered as the remittance of an “unscheduled principal payment.”  The servicer must send Fannie Mae the difference between the interest that was applied using the incorrect balance and the interest that should have been applied using the “correct” balance and rate.

When an ARM adjustment error involves an interest rate and payment change error and the error results in the use of a higher interest rate (and related monthly payment) than was required

- the mortgage loan amortizes at a slower pace, and
- the UPB is higher than it would have been from the amortization of the borrower's actual payment at the correct interest rate.

Although the servicer would have applied too much of the borrower's payment to interest and too little to principal, the servicer must not change the mortgage loan balance in Fannie Mae's investor reporting system records since Fannie Mae does not require it to change the borrower's actual UPB. Fannie Mae will recover the principal under-remittance as the higher UPB amortizes. Fannie Mae is not obligated to pay the servicer any interest on the amount of its over-remittance because the servicer is responsible for the accuracy of its ARM adjustments. The following table provides the servicer with additional information on how Fannie Mae will treat the error depending on mortgage loan type.

<b>If the interest rate and payment change error pertains to...</b>	<b>Then Fannie Mae...</b>
a portfolio mortgage loan with an actual/actual remittance type	will either: <ul style="list-style-type: none"> <li>• adjust the servicer's shortage/surplus account to reflect the servicer's over-remittance of interest, or</li> <li>• advise the servicer to reduce its next remittance by the amount of the overpaid interest.</li> </ul>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	Fannie Mae will adjust the loan level draft by the amount of additional interest due or the servicer's under-remittance of interest.



If the interest rate and payment change error pertains to...	Then Fannie Mae...
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	will not refund the servicer's over-remittance of interest since it is not recoverable from the security holder.

## Correcting an Interest Rate Change Error Only for an ARM Loan

When an ARM adjustment error involves an interest rate change error only and the error results in the use of a lower interest rate than was required:

- the mortgage loan amortizes at a faster pace, and
- the UPB is lower than it would have been from the amortization of the borrower's actual payment at the correct, higher interest rate.

Since Fannie Mae has decided that the borrower will not be required to make up undercharges, the servicer must not change the mortgage loan balance in Fannie Mae's investor reporting system records even though too little of the borrower's payment would have been applied to interest and too much to principal. The following table provides additional information depending on mortgage loan type.

If the interest rate and payment change error pertains to...	Then...
a portfolio mortgage loan with an actual/actual remittance type	Fannie Mae will treat the over-application of principal as a principal curtailment that was previously applied and will either <ul style="list-style-type: none"> <li>• adjust the servicer's shortage/surplus account to reflect the servicer's under-remittance of interest, or</li> <li>• advise the servicer to increase its next remittance by the amount of additional interest due Fannie Mae.</li> </ul>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	Fannie Mae will adjust the loan level draft by the amount of additional interest due or the servicer's under-remittance of interest.
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	The servicer's principal over-remittance cannot be recovered from the security holder—even though the security balance will be lower than it should have been—since the over-remittance will have been considered as the remittance of an “unscheduled principal payment.”  The servicer must send Fannie Mae the difference between the interest that was applied using the incorrect balance and, the interest that should have been applied using the “correct” balance and rate.

When an ARM adjustment error involves an interest rate error only and the error results in the use of a higher interest rate than was required by the mortgage note:

- the borrower has not actually paid too much, but
- his or her actual payment has been misallocated between principal and interest.



The servicer must report a principal curtailment to Fannie Mae to reduce the UPB of the mortgage loan by the amount of the interest overcharge, rather than refunding the overcharge to the borrower. The following table provides additional information depending on mortgage loan type.

If the interest rate error pertains to...	Then the servicer must...
a portfolio mortgage loan with an actual/actual remittance type	<p>not remit the funds for the principal curtailment since it has already over remitted interest to Fannie Mae.</p> <p>However, if the servicer cannot process a principal curtailment (which is normally a “cash” transaction) without remitting funds, it must report a “noncash” adjustment for the amount by which the UPB in Fannie Mae’s records needs to be reduced—as long as its Fannie Mae Investor Reporting Representative (see <a href="#">Servicing Guide F-4-03, List of Contacts</a>) agrees to this approach.</p> <p><b>Note:</b> The principal under-remittance and the interest over-remittance will be offsetting entries so there is no effect on the servicer’s shortage/surplus account and neither Fannie Mae nor the servicer owes the other any money.</p>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	<p>remit the amount of the principal under-remittance to Fannie Mae as an “unscheduled principal payment.”</p> <p>Fannie Mae will refund that over-remittance to the servicer.</p>
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	<p>remit the amount of the principal under-remittance to Fannie Mae as an “unscheduled principal payment.”</p> <p>Even though the servicer over remitted interest to Fannie Mae, Fannie Mae will not refund that over-remittance to the servicer since it is not recoverable from the security holder.</p>

Fannie Mae is not obligated to pay the servicer any interest on the amount of its over-remittance for either a portfolio mortgage loan or an MBS mortgage loan because the servicer is responsible for the accuracy of its ARM adjustments.

## Correcting a Payment Change Error Only for an ARM Loan

When an ARM adjustment error involves a payment change error only and the error results in the use of a higher monthly payment than was required:

- the mortgage loan amortizes at a faster pace, and
- the UPB is lower than it would have been from the amortization of the mortgage loan using the correct monthly payment.

In these cases, Fannie Mae treats the over-application of principal as a principal curtailment that was previously applied and leaves the existing UPB in place. However, if the borrower elected to receive a refund of the principal overcharge (or was otherwise given credit for the overcharge), the servicer must increase the



UPB of the mortgage loan by the amount of the overcharge by reporting the reversal of a principal curtailment. The following table provides additional details depending upon the mortgage loan type.

<b>If the payment change error pertains to...</b>	<b>Then...</b>
a portfolio mortgage loan with an actual/actual remittance type	Fannie Mae will either: <ul style="list-style-type: none"> <li>• adjust the servicer's shortage/surplus account to reflect the previous principal over-remittance, or</li> <li>• advise the servicer to decrease its next remittance by the amount of the overpaid principal.</li> </ul>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	Fannie Mae will adjust the loan-level draft to allow the servicer to recover the principal over-remittance.
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	The servicer's principal over-remittance (which results from the principal curtailment reversal) cannot be recovered from the security holder since it will have been considered as the remittance of an "unscheduled principal payment."

When an ARM adjustment error involves a payment change error and the error results in the use of a lower monthly payment than was required:

- the mortgage loan amortizes at a slower pace, and
- the UPB is higher than it would have been from the amortization of the mortgage loan using the correct monthly payment.

Although the servicer would have applied too much of the borrower's payment to interest and too little to principal, the servicer must not change the mortgage loan balance in Fannie Mae's investor reporting system records since Fannie Mae will not require the borrower to make up the principal undercharge. The following table provides additional information for correcting the error depending on mortgage loan type.

<b>If the payment change error pertains to...</b>	<b>Then Fannie Mae...</b>
a portfolio mortgage loan with an actual/actual remittance type	will either: <ul style="list-style-type: none"> <li>• adjust the servicer's shortage/surplus account to reflect the servicer's over-remittance of interest, or</li> <li>• advise the servicer to decrease its next remittance by the amount of the overpaid interest.</li> </ul>
a portfolio mortgage loan with a scheduled/scheduled or scheduled/actual remittance type	will refund the servicer's over-remittance of interest.
a mortgage loan in an MBS pool with a scheduled/scheduled remittance type	will not refund the servicer's over-remittance of interest since it is not recoverable from the security holder.

Fannie Mae is not obligated to pay the servicer any interest on the amount of its over-remittance for either a portfolio mortgage loan or an MBS mortgage loan because the servicer is responsible for the accuracy of its ARM adjustments.



## Chapter 5, Formulas and Calculations

### 5-01, Mathematical Formulas (11/12/2014)

The Fannie Mae investor reporting system uses a number of mathematical formulas in the update process for either computational or editing purposes. The servicer may incorporate use of these formulas into its own systems to reduce the potential for rejected transactions.

### 5-02, Calculations Related to Pass-through Rates (06/12/2019)

Generally, the pass-through rate for a mortgage loan is established when Fannie Mae purchases or securitizes the mortgage loan and remains in effect for the life of the mortgage loan. However, this is not true for ARMs since the servicer must determine a new pass-through rate at any time the interest rate of the mortgage loan changes (including a change related to the conversion of the mortgage loan to a fixed interest rate). Calculations for determining the applicable pass-through rates in these situations are included in this Section.

#### Determining Pass-through Rates for Converted ARMs

When an ARM in Fannie Mae's portfolio converts to a fixed-rate mortgage loan, the servicer must determine:

- a new interest rate, and
- a new pass-through rate.

The calculation for these rates is the same regardless of whether the mortgage loan has an actual/actual or a scheduled/actual remittance type.

The servicer must calculate the new interest rate and pass-through rate for the converted ARM loan by completing the steps shown in the following table.

Step	Servicer Action
1	Increase the applicable Fannie Mae required yield by 0.625% (or 0.875% if the property is a co-op unit).
2	Round the result to the nearest 0.125%.
3	Reduce this new interest rate by a servicing fee of 0.375% (or the applicable negotiated servicing fee rate) to develop the new pass-through rate for the converted mortgage loan.

#### Determining Pass-through Rates for ARM Adjustments

There are two methods for determining the new pass-through rate when the interest rate for an ARM changes:

- the “top-down” method, and
- the “bottom-up” method.

For ARM whole loan commitments dated prior to September 11, 2017, the “bottom-up” method can be used, but for commitments dated on or after September 11, 2017, the “top-down” method must be used when calculating the pass-through rate at rate reset.





The “top-down” method must be used for mortgage loans in most weighted-average structure MBS pools (excluding ARM Flex Plus® pools), while the “bottom-up” method must be used for mortgage loans in stated-structure MBS pools and ARM Flex Plus MBS pools.

**A. “Top-down” method.** The following table illustrates the “top-down” method of determining the new pass-through rate for an ARM after an interest rate change:

	New Interest Rate
-	Servicing Fee Rate
-	Guaranty Fee Rate (for MBS Mortgage Loans only)
-	Excess Yield (if applicable)
=	New Pass-through Rate

**B. “Bottom-up” method.** The calculation for determining the new pass-through rate for an ARM after an interest rate change under the “bottom-up” method involves six steps. The servicer must complete the steps as shown in the following table.

Step	Servicer Action
1	Determine the net mortgage margin by subtracting the servicing fee (and, if the mortgage loan is in an MBS pool, the guaranty fee) from the mortgage margin.
2	Verify Fannie Mae's required margin (as reflected on the Trial Balance Report).
3	Determine the “uncapped” pass-through rate by adding the lesser of: <ul style="list-style-type: none"> <li>• Fannie Mae's required margin, or</li> <li>• the net mortgage margin</li> </ul> to the index value used to determine the new mortgage loan interest rate.
4	Determine the minimum pass-through rate by selecting the greater of: <ul style="list-style-type: none"> <li>• the current pass-through rate less the per adjustment downward cap, or</li> <li>• the pass-through rate floor (as reflected on the Trial Balance Report).</li> </ul> <p><b>Note:</b> <i>In the absence of a stated pass-through rate floor, Fannie Mae's required margin becomes the pass-through rate floor.</i></p>
5	Determine the maximum pass-through rate by selecting the lesser of: <ul style="list-style-type: none"> <li>• the current pass-through rate plus the per adjustment upward cap, or</li> <li>• the pass-through rate ceiling (as reflected on the Trial Balance Report).</li> </ul>



Step	Servicer Action
6	<p>Determine the new pass-through rate by comparing the “uncapped” pass-through rate to the minimum and maximum pass-through rates.</p> <ul style="list-style-type: none"> <li>• If the “uncapped” pass-through rate is less than the minimum pass-through rate, the minimum pass-through rate will be the new pass-through rate.</li> <li>• If the “uncapped” pass-through rate is greater than the minimum pass-through rate and less than the maximum pass-through rate, it will be the new pass-through rate.</li> <li>• If the “uncapped” pass-through rate is greater than the maximum pass-through rate, the maximum pass-through rate will be the new pass-through rate.</li> </ul>

### Related Announcements

The following table provides references to Announcements that are related to this topic.

Announcements	Issue Date
<a href="#">Announcement SVC-2019-04</a>	June 12, 2019
<a href="#">Announcement SVC-2017-07</a>	August 16, 2017

## 5-03, Calculations Related to Servicing Fee/Excess Yield (11/12/2014)

All mortgage loans have a servicing fee that is specified at the time the mortgage loan is purchased or securitized and that generally remains constant over the life of the mortgage loan (although it may change when an ARM is converted to a fixed-rate mortgage loan). Some ARM MBS pools allow variances in the individual servicing fee for a mortgage loan from time to time to achieve a fixed margin for the MBS pool. In addition, some mortgage loans have excess yield because the mortgage loan interest rate is higher than the sum of Fannie Mae's required yield and the minimum required servicing fee. Excess yield is not always guaranteed over the life of the mortgage loan.

To calculate the servicing fee for an ARM in an MBS pool that has a fixed MBS margin, the servicer must use the formula shown in the following table.

	Mortgage Margin
-	Fixed MBS Margin
-	Guaranty Fee Rate
=	Servicing Fee Rate

To calculate excess yield for any mortgage loan, the servicer must use the calculation shown in the following table.

	Note Rate
-	Pass-through Rate
-	Servicing Fee Rate



-	Guaranty Fee Rate (for MBS Mortgage Loan only)
=	Excess Yield

## 5-04, Exhibits (01/18/2017)

### Exhibit 1: Monthly Fixed Installment Formula

Step 1	<p>Determine the monthly interest rate factor by dividing the annual interest rate by 12. Carry the quotient out to 10 decimal places and then round to 9 decimal places by adding .0000000005.</p> <p style="text-align: center;">Let:</p> <p style="text-align: center;">I     =     annual interest rate i     =     monthly interest rate factor</p> <p style="text-align: center;">Then:</p> $i = \frac{I}{12} + .0000000005$
Step 2	<p>Calculate the payment for each \$1,000 of the loan amount. The calculation is carried out to 7 decimal places, and then rounded to 6 decimal places by adding .0000005.</p> <p style="text-align: center;">Let:</p> <p style="text-align: center;">i     =     monthly interest rate factor N     =     remaining term of the mortgage loan (in months) P     =     payment per \$1,000 of loan amount</p> <p style="text-align: center;">Then:</p> $P = \frac{(1,000)(i)}{1 - \left[ \frac{1}{1+i} \right]^N} + .0000005$ <p><b>Note:</b> This formula cannot be used to determine the monthly payment per \$1,000 for GPM loans. HUD publishes factors for the FHA GPM loans. Those factors are also used for VA GPM loans.</p>



Step 3

Divide the original loan amount by 1,000 and multiply by the payment per \$1,000 of loan amount. Round the result to 2 decimal places by adding .005. The final answer is the monthly fixed installment.

Let:

OLA = original loan amount  
P = payment per \$1,000 of loan amount  
P&I = monthly fixed installment

Then:

$$P \text{ \& \; } I = \frac{OLA}{1,000} \times P + .005$$

**Note:** When calculating a new payment for an ARM, use the UPB instead of the original loan amount.



Example: The monthly fixed installment for a \$70,000 30-year mortgage loan with an interest rate of 15.5% would be determined as follows:

$$\begin{aligned} \text{Step 1} \quad i &= \frac{.155000}{12} + .0000000005 \\ i &= .129166667 + .0000000005 \\ i &= .012916667 \end{aligned}$$

$$\begin{aligned} \text{Step 2} \quad P &= \frac{(1,000)(.012916667)}{1 - \left[ \frac{1}{1 + .012916667} \right]^{360}} + .00000005 \\ P &= \frac{12.916667}{1 - .009850580} + .00000005 \\ P &= \frac{12.916667}{.990149421} + .00000005 \\ P &= 13.045170 \\ \text{Step 3} \quad P\&I &= \frac{70,000}{1,000} \times 13.045170 + .005 \\ P\&I &= 913.1619 + .005 \\ P\&I &= \$913.16 \end{aligned}$$

**Note:** Calculation of the actual/actual biweekly mortgage loan is different than that of a regular amortizing loan. The following represents the actual/actual biweekly mortgage loan installment formula.

$$\begin{aligned} \text{Step 1} \quad &\text{Calculate monthly payment for appropriate term loan (e.g. 15-year, 30-year).} \\ &\bullet \quad \text{UPB} \times \left[ \frac{\text{annual interest rate}/12 - 1}{(1 \text{ annual interest rate}/12)^{\text{term}}} \right] = \text{monthly payment} \\ \text{Step 2} \quad &\text{Biweekly payment} \\ &\bullet \quad \text{Monthly payment}/2 \end{aligned}$$



**Example:** The monthly fixed installment for a \$100,000 30-year actual/actual biweekly mortgage loan with an interest rate of 7% would be determined as follows:

**Step 1** Monthly payment

$$100000 \times [(0.070/12 - 1)/(1 - .070/12^{-360})] = \$665.30$$

**Step 2** Biweekly payment

$$665.30/2 = \$332.65$$

Actual/Actual biweekly loans are amortized every 14 days using a 365-day basis year for interest calculation.



## Exhibit 2: Regular Amortization Formula

Step 1	<p>Determine the monthly interest rate factor by dividing the annual interest rate by 12. Carry the quotient out to 10 decimal places and then round to 9 decimal places by adding .0000000005.</p> <div data-bbox="592 373 1170 663" style="border: 1px solid black; padding: 10px;"><p>Let:</p><math display="block">I = \text{annual interest rate}</math><math display="block">i = \text{monthly interest rate factor}</math><p>Then:</p><math display="block">i = \frac{I}{12} + .0000000005</math></div>
Step 2	<p>Calculate the interest portion of the monthly payment by multiplying the UPB by the monthly interest rate factor. Add .005 for rounding.</p> <div data-bbox="521 762 1245 1045" style="border: 1px solid black; padding: 10px;"><p>Let:</p><math display="block">i = \text{monthly interest rate factor}</math><math display="block">\text{UPB(oid)} = \text{present UPB}</math><math display="block">I = \text{interest portion of the monthly payment}</math><p>Then:</p><math display="block">I = i \times \text{UPB (oid)} + .005</math></div>
Step 3	<p>Determine the principal portion of the monthly payment by subtracting the interest portion from the monthly fixed installment.</p> <div data-bbox="511 1144 1255 1430" style="border: 1px solid black; padding: 10px;"><p>Let:</p><math display="block">\text{P\&amp;I} = \text{monthly fixed installment}</math><math display="block">I = \text{interest portion of the monthly payment}</math><math display="block">P = \text{principal portion of the monthly payment}</math><p>Then:</p><math display="block">P = \text{P\&amp;I} - I</math></div>
Step 4	<p>Reduce the present unpaid balance by the principal portion of the monthly payment to determine the UPB after amortizing for one payment.</p> <div data-bbox="466 1528 1300 1814" style="border: 1px solid black; padding: 10px;"><p>Let:</p><math display="block">\text{UPB (old)} = \text{present UPB}</math><math display="block">P = \text{principal portion of the monthly payment}</math><math display="block">\text{UPB (new)} = \text{UPB after amortization}</math><p>Then:</p><math display="block">\text{UPB (new)} = \text{UPB(oid)} - P</math></div>



Example: The first month's amortization for a \$70,000 30-year mortgage loan with an annual interest rate of 15.5% and a monthly fixed installment of \$913.16 would be computed as follows:

Step 1	$i$	=	$\frac{.155000}{12} + .0000000005$
	$i$	=	$.0129166667 + .0000000005$
	$i$	=	$.012916667$
Step 2	$I$	=	$(70,000) (.012916667) + .005$
	$I$	=	$\$904.17$
Step 3	$P$	=	$\$913.16 - \$904.17$
	$P$	=	$\$8.99$
Step 4	UPB (new)	=	$\$70,000 - \$8.99$
	UPB (new)	=	$\$69,991.01$





### Exhibit 3: Negative Amortization Formula

Step 1	<p>Determine the monthly interest rate factor by dividing the annual interest rate by 12. Carry the quotient out to 10 decimal places and then round to 9 decimal places by adding .0000000005.</p> <p>Let:</p> $I = \text{annual interest rate}$ $i = \text{monthly interest rate factor}$ <p>Then:</p> $i = \frac{I}{12} + .0000000005$
Step 2	<p>Calculate the interest portion of the monthly payment by multiplying the UPB by the monthly interest rate factor. Add .005 for rounding.</p> <p>Let:</p> $i = \text{monthly interest rate factor}$ $\text{UPB (old)} = \text{present UPB}$ $I = \text{calculated interest portion of the monthly payment}$ <p>Then:</p> $I = i \times \text{UPB (old)} + .005$
Step 3	<p>Determine the monthly payment shortage by finding the difference between the calculated interest and the monthly fixed installment.</p> <p>Let:</p> $P\&I = \text{monthly fixed installment}$ $I = \text{calculated interest}$ $P = \text{the monthly payment shortage and the amount by which the UPB will increase}$ <p>Then:</p> $P = I - P\&I$



Step 4	<p>Develop the new UPB by increasing the present UPB by the amount of the monthly payment shortage.</p> <p>Let:</p> <p>UPB (old) = present UPB</p> <p>P = monthly payment shortage (or the addition to principal)</p> <p>UPB (new) = UPB after the negative amortization</p> <p>Then:</p> <p>UPB (new) = UPB (old) + P</p>
Example:	<p>The first month's amortization for a \$70,000 30-year GPM loan (or an ARM that has negative amortization under the first payment) with an interest accrual rate of 15.5% and a monthly fixed installment of \$717.19 would be computed as follows:</p> <p>Step 1 <math>i = \frac{.155000}{12} + .0000000005</math></p> <p><math>i = .0129166667 + .0000000005</math></p> <p><math>i = .012916667</math></p> <p>Step 2 <math>I = .012916667 \times 70,000 + .005</math></p> <p><math>I = \\$904.17</math></p> <p>Step 3 <math>P = \\$904.17 - \\$717.19</math></p> <p><math>P = \\$186.98</math></p> <p>Step 4 <math>UPB (new) = \\$70,000 + \\$186.98</math></p> <p><math>UPB (new) = \\$70,186.98</math></p>



## Exhibit 4: Reverse Amortization Formula

Step 1	<p>Determine the monthly interest rate factor by dividing the annual interest rate by 12. Carry the quotient out to 10 decimal places and then round to 9 decimal places by adding .0000000005.</p> <p>Let:</p> $\begin{aligned} I &= \text{annual interest rate} \\ i &= \text{monthly interest rate factor} \end{aligned}$ <p>Then:</p> $i = \frac{I}{12} + .0000000005$
Step 2	<p>Develop the UPB that will result from the reversal of the payment.</p> <p>Let:</p> $\begin{aligned} \text{UPB (old)} &= \text{present UPB} \\ \text{P\&I} &= \text{fixed monthly interest rate factor} \\ i &= \text{monthly interest rate factor} \\ \text{UPB (new)} &= \text{UPB following the reversal} \end{aligned}$ <p>Then:</p> $\text{UPB (new)} = \frac{\text{UPB (old)} + \text{P \& I}}{1 + i}$
Step 3	<p>Subtract the new UPB from the old UPB to determine the amount of principal that was reversed.</p> <p>Let:</p> $\begin{aligned} \text{UPB (new)} &= \text{UPB following the reversal} \\ \text{UPB (old)} &= \text{present UPB} \\ P &= \text{amount of principal reversed} \end{aligned}$ <p>Then:</p> $P = \text{UPB (new)} - \text{UPB (old)}$
Step 4	<p>Subtract the amount of principal that was reversed from the fixed installment to determine the amount of interest that was reversed.</p> <p>Let:</p> $\begin{aligned} \text{P\&I} &= \text{monthly fixed installment} \\ P &= \text{amount of principal reversed} \\ I &= \text{amount of interest reversed} \end{aligned}$ <p>Then:</p> $I = \text{P\&I} - P$



Example: The reversal of one month's amortization for a loan that has a UPB of \$69,991.01, an annual interest rate of 15.5%, and a monthly fixed installment of \$913.16 would be determined as follows:

Step 1	$i$	=	$\frac{.155000}{12} + .0000000005$
	$i$	=	$.0129166667 + .0000000005$
	$i$	=	$.012916667$
Step 2	UPB (new)	=	$\frac{\$69,991.01 + \$913.16}{1 + .012916667}$
	UPB (new)	=	$\frac{\$70,904.17}{1.012916667}$
	UPB (new)	=	$\$70,000.00$
Step 3	$P$	=	$\$70,000 - \$69,991.01$
	$P$	=	$\$8.99$
Step 4	$I$	=	$\$913.16 - \$8.99$
	$I$	=	$\$904.17$



## Exhibit 5: Servicing Fee/Yield Differential Adjustment Formula

Step 1	<p>Divide the annual servicing fee rate by the annual interest rate to determine the monthly servicing fee factor. Carry the quotient out to 7 decimal places and round to 6 by adding .0000005.</p> <p>Let:</p> $\begin{aligned} sf &= \text{annual servicing fee rate} \\ i &= \text{annual interest rate} \\ s/f &= \text{monthly servicing fee factor} \end{aligned}$ <p>Then:</p> $s/f = \frac{sf}{i} + .0000005$
Step 2	<p>Determine the calculated monthly interest amount by multiplying the UPB by the annual interest rate and dividing by 12. Limit the answer to 3 decimal places.</p> <p>Let:</p> $\begin{aligned} UPB &= \text{present UPB} \\ i &= \text{annual interest rate} \\ I &= \text{calculated monthly interest rate} \end{aligned}$ <p>Then:</p> $I = \frac{UPB \times i}{12}$
Step 3	<p>Multiply the calculated monthly interest amount by the monthly servicing fee factor to determine the amount of the monthly servicing fee due the servicer. Add .005 for rounding.</p> <p>Let:</p> $\begin{aligned} I &= \text{calculated monthly interest amount} \\ s/f &= \text{monthly servicing fee factor} \\ SF &= \text{amount of servicing fee due} \end{aligned}$ <p>Then:</p> $SF = I \times s/f + .005$ <p><b>Note:</b> Always use calculated interest instead of interest collected to ensure a servicing fee on any deferred interest that is capitalized.</p>



Example: The first month's servicing fee for a \$70,000 30-year mortgage loan that has an annual interest rate of 15.5% and an annual servicing fee of 0.375% would be determined as follows:

Step 1	s/f	=	$\frac{.00375}{.15500} + .0000005$
	s/f	=	$.0241935 + .0000005$
	s/f	=	$.024194$
Step 2	I	=	$\frac{70,000 \times .15500}{12}$
	I	=	$\frac{1085000.000}{12}$
	I	=	$\$904.166666$
	I	=	$904.166$
Step 3	SF	=	$(904.166 \times .024194) + .005$
	SF	=	$21.875392204 + .005$
	SF	=	$\$21.88$

**Note:** Use this same method to calculate yield differential due the servicer. Just substitute the monthly yield differential rate for the servicing fee rate in Step 1.

## Exhibit 6, Mapping Fannie Mae Investor Reporting System Records to EDI Investor Reporting Trans Set 203

Fannie Mae also accepts the ANSI x12 EDI format, transaction set 203, Secondary Mortgage Market Investor Report for reporting of loan activity. The transaction set 203 consists of the following:

EDI Segment - identifies the transaction segment which includes a two or three digit code assigned to identify the segment and the name of the segment.

EDI Position - specifies the order in which the segment appears in the transaction set.

EDI Reference - indicates the segment and position.

EDI Data Element and Description - indicates the data element name and what it is.

EDI Requirement Designation - indicates if the field and/or segment is mandatory

Value - indicates mandatory value(s).



EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
<b>Header</b>								
ST (Transaction Set)	010	ST01	Identifier Code	Code uniquely identifying a transaction set	Mandatory Field Mandatory Segment	203 (Secondary Mortgage Market Investor Report)	N/A	N/A
		ST02	Control Number	Identifying control number that must be unique	Mandatory Field Mandatory Segment	Assigned by the translation software	N/A	N/A
BGN (Beginning Segment)	020	BGN01	Purpose Code	Code identifying the purpose of the transaction set	Mandatory Field Mandatory Segment	00 (Original) 41 (Corrected and verified)	N/A	N/A
		BGN02	Reference Identification	Reference number or identification number	Mandatory Field Mandatory Segment	LAR (Loan Activity Report)	N/A	N/A
		BGN03	Date	Date	Mandatory Field Mandatory Segment	Current date formatted as YYMMDD	N/A	N/A
		BGN04	Time	Time expressed in 24-hour clock notation	Optional Field Mandatory Segment	Time formatted as HHMM where H = hours (00-23) and M = minutes (00-59)	N/A	N/A
		BGN05	Time Code	Code identifying the time.	Optional Field Mandatory Segment	LT (Local Time)	N/A	N/A
DTP (Date or Time or Period)	030	DTP01	Date/Time Qualifier	Code specifying the type of date or time, or both date and time	Mandatory Field Mandatory Segment	730 (Reporting Cycle Date)	N/A	N/A
		DTP02	Date Time Period Format Qualifier	Code indicating the date format, time format, or date and time format.	Mandatory Field Mandatory Segment	Reporting Cycle Date formatted as CCYYMM	N/A	N/A
		DTP03	Date Time Period	Expression of a date, a time, or range of dates, times or dates and times.	Mandatory Field Mandatory Segment	Date of report formatted as CCYYMMDD	N/A	N/A
REF (Reference Information)	040	REF01	Reference Identification Qualifier	Code qualifying the reference identification	Mandatory Field Mandatory Segment	V8 (Institution Number)	N/A	N/A
		REF02	Reference Identification	Reference information as defined for a particular transaction set or as specified by the reference identification qualifier	Mandatory Field Mandatory Segment	The Fannie Mae assigned servicer number	Fannie Mae Lender Number	1-9



EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
<b>Details</b>								
Assigned Number (LX)	010	LX01	Assigned Number	Number assigned for differentiation within a transaction set. The LX segment should be used each time a unique loan number is reported as well as when reporting multiple curtailments for one loan.	Mandatory Field Mandatory Segment	The value reported in the first instance should be one. From there, increment by a value of 1 for each subsequent use of the LX segment	N/A	N/A
REF (Reference Identification)	020	REF01	Reference Identification Qualifier	Code qualifying the reference identification qualifier  Use the REF segment if the Subservicer number for the loan is being added, modified or deleted.	Mandatory Field Optional Segment  When it is necessary to report this optional segment, 3 iterations of the segment are required to report the necessary information	19 (Division Identifier)  T8 (Description of Change Code)  V9 (Subservicer)	N/A	N/A
		REF02	Reference Identification	1 <sup>st</sup> iteration	Mandatory Field Optional Segment	For REF 01 value V9, report the Fannie Mae sub-servicer number	(80) Subservicer Number	15-23
				2 <sup>nd</sup> iteration	Mandatory Field Optional Segment	For REF01 value T8, report an "A", "C" or "D" for add, change or delete	(80) Subservicer Modification Code	14
				3 <sup>rd</sup> iteration	Mandatory Field Optional Segment	For REF01 value 19, report "00" (zero zero) for one loan identified in RLT loop; report "01" for all mortgage loans, "04" for one MBS pool and :09: for one remittance type	(80) Subservicer Type Code	24-25





EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
RLT (Real Estate Loan Type)	050	RLT01	Reference Identification Qualifier	The number assigned by the investor to the mortgage when the investor is different from the insured or payee	Mandatory Field Optional Segment	Investor identifier	N/A	N/A
		RLT02	Reference Identification	Reference information as defined	Mandatory Field Optional Segment	Fannie Mae Loan Number	(96) Fannie Mae Loan Number	14-23
		RLT03	Reference Identification Qualifier	Code qualifying the reference identification	Conditional Field Optional Segment	VO (Institution Loan Number)	—	—
		RLT04	Reference Identification	Reference information as defined for a particular transaction set	Conditional Field Optional Segment	Lender Loan Number	(81) New Lender Loan I.D.	24-38
DTP (Date or Time or Period)	060	DTP01	Date/Time Qualifier	Code specifying type of date or time, or both date and time	Mandatory Field Mandatory Segment	731 (Last Paid Installment Date) 733 (Date of Last Payment Received) 734 (Curtailment Date)	N/A	N/A
		DTP02	Date Time Period Format Qualifier	Code indicating the date format, time format, or date and time format	Mandatory Field Mandatory Segment	Date expressed as CCYYMMDD	N/A	N/A
		DTP03	Date Time Period	Expression of a date, a time, or range of dates, times or dates and times	Mandatory Field Mandatory Segment	Last Paid Installment Date	(96) LPI Date	24-27
					Mandatory Field Mandatory Segment	Date of Last Full Payment	N/A	N/A
					Mandatory Field Mandatory Segment	Curtailment Date	N/A	N/A
		AMT (Monetary Amount)	070	AMT01	Amount Qualifier Code	Code to qualify amount	Mandatory Field Mandatory Segment	YB (Actual Unpaid Principal Balance) YD (Principal Due to Investor) V2 (Interest Due to Investor) YF (Other Fee Collection)



EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
						YK (Prepayment Penalty) YJ (Curtailment)		N/A
		AMT02	Monetary Amount	Monetary amount	Mandatory Field Mandatory Segment	Express as a data type Real Number "R". Display the decimal point and sign	(96) UPB (96) Principal (96) Interest (96) Other Fees Prepay Penalty Curtailment	28-38 50-60 39-49 69-76 — —
IRA (Investor Reporting Action Code)	080	IRA01	Investor Reporting Action Code	Code identifying the type of investor reporting action	Mandatory Field	09 (Payoff) 10 (Payoff – Repurchased_ 1B (Real Estate Owned Property_ 1D (FHA or VA Owned Conveyance) 1H (Third Party Sale, Pre-Foreclosure Sale and Short Payoff) 1M (Mortgage Insurance Cancellation by homeowner 1O (Mortgage Insurance Cancellation by servicer based on automatic cancellation provisions 1P (Mortgage Insurance Cancellation based on mandatory termination for high risk loan	(96) Action Code for Payoff, Repurchase, REO, Third Party sale  (89) Action Code for MI Discontinuance	(96) 61-62 (89) 24-25
		IRA02	Date Time Period Format Qualifier	Code indicating the date format, time format, or date and time format	Conditional Field Optional Segment	D8 (Action Date expressed as CCYYMMDD format)	—	—



EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
		IRA03	Date Time Period	Expression of a date, a time, or range of dates, times or dates and times	Conditional Field		(96) Action Date	63-68
PRC (Payment Rate Change)	100	PRC01	Date/Time Qualifier	Code specifying type of date or time, or both date and time	Mandatory Field Optional Segment		N/A	N/A
		PRC02	Date Time Period Format Qualifier	Code indicating the date format, time format, or date and time format	Mandatory Field Optional Segment	D8 (Effective date is expressed in a CCYYMMDD format)	N/A	N/A
		PRC03	Date Time Period	Expression of a date, a time, or range of dates, times or dates and times	Mandatory Field Optional Segment	Effective date of the change	(83) Effective Date of Rate or Payment Change	24-27
		PRC04	Index Rate	The index rate	Optional Field* Optional Segment	Index value (expressed with a decimal point. Ex. Index value of 04.2500% would be reported as 4.25)	(83) Index Value	28-33
		PRC05	Interest Rate	The pass through interest rate	Optional Field* Optional Segment	New pass through rate (expressed with a decimal point. Ex. 5.5% would be reported as 5.5)	(83) Pass-Thru Rate	40-45
		PRC06	Interest Rate	The new interest rate	Optional Field* Optional Segment	New interest rate (expressed with a decimal point. Ex. 9.375% would be reported as 9.375)	(83) New Interest Rate	34-39
		PRC07	Amount Qualifier Code	Code to qualify amount	Conditional Field Optional Segment	YI (New principal and interest payment amount)	N/A	N/A
		PRC08	Monetary Amount	The new P&I payment amount	Conditional Field Optional Segment	Expressed as a real number using a decimal point (Ex. A payment amount	(83) New P&I Payment	46-54



EDI Segment ID	EDI Position	EDI Reference	EDI Data Element	EDI Description	EDI Requirement Designation	EDI Value	LAR Current Investor Reporting Action Code & Data Element Name	LAR Location of Data Element
						of \$1,020.30 would be expressed as 1020.3)		
		PRC09	Yes/No Condition or Response Code	Indicates whether the loan interest rate has been converted	Optional Field Optional Segment	Y (Yes, the loan has been converted from an ARM to a Fixed Rate loan)	(83) Converted to Fixed Rate	58
		PRC10	Quantity Qualifier	Code specifying the type of quantity	Conditional Field Optional Segment	ZR (Extended term of the loan as a result of the change)	N/A	N/A
		PRC11	Quantity	New extended term of the loan	Conditional Field Optional Segment	Expressed in number of months	(83) Extended Term	55-57
		PRC12	Composite Unit of Measure	Identifies a composite unit of measure	Conditional Field Optional Segment	MO (months)	N/A	N/A
NX (Real Estate Property ID Component)	110	NX201	Address Component Qualifier	Code qualifying the type of address component	Mandatory Field Optional Segment	07 (City Name) 15 (Unstructure Street Address) 19 (Zip Code – 9 digit)	N/A	N/A
		NX202	Address Information	The address change component	Mandatory Field Optional Segment	15 (Unstructure Street Address) 07 (City Name) 19 (Zip Code – 9 digit)	(82) Street Address (82) City (82) Zip Code	24-55 56-70 71-75