Daily Prepayment Report

User Guide: Version 1

Last Updated: March 2023

Additional Information

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Introduction

Freddie Mac's Daily Prepayment Report (DPR) is a weekly trend-analysis that provides additional transparency into the prepayment performance of Freddie Mac securities by reporting full voluntary prepayment activity leading into the upcoming monthly factor date (business day 4). A voluntary prepayment occurs when a loan is paid-off prior to the maturity date, either when the borrower repays the note amount in full, or the loan is refinanced.

For each eligible cohort, the DPR provides standard prepayment measures in the form of a Single-Month Mortality (SMM) rate and a Conditional Prepayment Rate (CPR), as calculated by Freddie Mac. The SMM is measured as a per-month percentage of mortgages in the MBS cohort that will be paid off early while the CPR gives the annual prepayment percentage as opposed to a monthly snapshot. The SMM and CPR are provided as both a daily rate and a cumulative rate for the reporting month. The report will include the components necessary for market participants to calculate their own prepayment speeds, if they choose.

Please direct any questions regarding the Daily Prepayment Report to Freddie Mac Investor Inquiry (investor_inquiry@freddiemac.com).

Timing and Availability

The Daily Prepayment Report will be published every Wednesday at 4:30PM and will provide daily voluntary payoff activity from the week prior. The report will include payoff transactions reported to and processed by Freddie Mac for each day of the preceding week. This will result in payoff activity being represented on weekends and holidays within the report. The text file version of the report will be cumulative throughout the reporting month while the excel version of the report will be cumulative month-over-month with a historical lookback to the February 2019 factor.

Generally one Daily Prepayment Report file will be published each week, however two Daily Prepayment Report files will be published in the approximately the second week of the month; one that will complete payoff activity for the current month factor (with payoff activity from the day after the 2nd business day of prior month to 2nd business day of current month) and another file that will begin disclosing payoff activity for the next factor (with payoff activity from the day after the 2nd business day of current month to the Friday of the prior week).

An example publication calendar:

DPR Publication Date	# File(s)	Reporting Period
6/29/2022	1 file	Jul factor file – 6/3 to 6/24
7/6/2022	1 file	Jul factor file – 6/3 to 7/1
7/13/2022	2 files	Jul factor file – 6/3 to 7/5
		Aug factor file – 7/6 to 7/8
7/20/2022	1 file	Aug factor file – 7/6 to 7/15
7/27/2022	1 file	Aug factor file – 7/6 to 7/22
8/3/2022	1 file	Aug factor file – 7/6 to 7/29
8/10/2022	2 files	Aug factor file – 7/6 to 8/2
		Sep factor file – 8/3 to 8/5

The Daily Prepayment Report is generated in both a machine-readable text file and a user-friendly excel file. The files can be accessed from the following websites.

- Freddie Mac's Daily Prepayment Report Webpage - An excel version of the daily prepayment report (the "supplemental file") containing cumulative, month-over-month full voluntary prepayment information. A one-time historical file will also be posted to the webpage containing daily prepayment information for all applicable cohorts dating back to February 2019 factor.
- Security Lookup User Interface – A text-file version of the daily prepayment report with cumulative full voluntary payoff information for the current reporting month. The file is posted in the "Data Reports and Files" section of the website. Users will need to create a login profile and accept data usage terms and conditions to access the files.

Population Drivers

The securities included in the Daily Prepayment Report are determined based on the following criteria:

- Cohort Determination
    - All cohorts with an aggregate current UPB >= $500M (at the beginning of each month) are included in the report.
    - The aggregate current UPB is based on the most recently disclosed factor information.
    - Cohorts are grouped by security type, coupon, and issuance year (current factor date minus weighted average loan age (WALA)).
- The report only includes **full voluntary payoff activity**, accounting for most of the monthly prepayment volume.
- The report is generated on a weekly basis and includes payoff activity for each day (Saturday to Friday) in the previous week. The report is cumulative for the entire factor month and will represent payoff activity from the day after the second business day (BD2+CD1) through the second business day (BD2).

The following securities are excluded from the report:

- Securities issued in the current reporting month
- Multifamily securities
- ARM securities issued prior to 2006
- Resecuritizations (level 2 securities)
- Pseudopools

File Specifications

Freddie Mac publishes two versions of the Daily Prepayment Report on a weekly basis; a pipe-delimited text file as well as a user-friendly excel spreadsheet. Please reference the "Timing and Availability" section of this guide for information on where and when those files are available.

File Name	Description
FRE_DPR_Fctr_YYYYMM.txt	A pipe-delimited text file containing cumulative data through the current reporting month. The file name date represents the upcoming factor where the payoff data will be applied. For instance, FRE_DPR_Fctr_202203 would report on payoff activity from February 3rd to March 2nd. The file contains a header row.
FRE_DPR_Cumulative.xlsx	An Excel spreadsheet containing cumulative month-over-month payoff data, including activity in the current month. This file will contain multiple years of information. Beginning with the April 2023 factor data, this report will represent all calendar days, even in the absence of payoff activity. Prior to that date, the file only represented days with actual payoff activity.
FRE_HDPR_Fctr_201902_to_202303.txt	A pipe-delimited text file containing historical payoff information back to February 2019 factor. The file contains a header row. The file will only contain prepayment data through the March 2023 factor. This file only represents days with actual payoff activity.

Text File Pipe-Delimited Header Row:

Type of Security|Year|WA Net Interest Rate|Cohort Current UPB|Cohort WA Current Interest Rate|Cohort WA Current Remaining Months to Maturity|Cohort WA Current Loan Age|Date|Factor Date|Principal Reduction Amount|Cumulative Principal Reduction Amount|Unscheduled Principal Reduction Amount|Cumulative Unscheduled Principal Reduction Amount|SMM|Cumulative SMM|CPR|Cumulative CPR

Report Attributes

All versions of the Daily Prepayment Report will contain the following attributes:

1	Attribute:	Type of Security
	Definition:	The security cohort categories that are represented in the report. All securities will be assigned to one cohort.
	Data Type:	String
	Max Length:	50
	Format:	N/A
	Valid Values:	30yr TBA Eligible 20yr TBA Eligible 15yr TBA Eligible 10yr TBA Eligible Super-Conforming > 15yr Super-Conforming <= 15yr Other Fixed-Rate > 15yr Other Fixed-Rate <= 15yr Government Fixed-Rate RPL ARM
	Notes:	

2	Attribute:	Year
	Definition:	The origination year of the underlying securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	4
	Format:	CCYY
	Valid Values:	2019 2020 2021 2022 Etc.
	Notes:	
	Calculation:	Current factor date minus the Current WA Loan Age

3	Attribute:	WA Net Interest Rate
	Definition:	The weighted average interest rate (less servicing fees and guarantor fees) of the underlying securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	6
	Format:	2.3
	Valid Values:	0.500 1.000 1.500 2.000 2.500 3.000 3.500 4.000

		4.500 5.000 5.500 6.000 6.500 7.000 7.500 8.000 8.500 9.000 9.500 10.000 10.500 >=11.000
	Notes:	In the historical DPR file, the greatest coupon range included is >= 6.5% for factor data prior to August 2022.
	Calculation:	The Weighted Average Net Interest Rate of the cohort is backed by securities with WA Net Interest Rates within the following ranges:

WA Net Interest Rate (Cohort)	WA Net Interest Rate Ranges (Underlying Securities)
0.500	< 0.750
1.000	= 0.750 to < 1.250
1.500	= 1.250 to < 1.750
2.000	= 1.750 to < 2.250
2.500	= 2.250 to < 2.750
3.000	= 2.750 to < 3.250
3.500	= 3.250 to < 3.750
4.000	= 3.750 to < 4.250
4.500	= 4.250 to < 4.750
5.000	= 4.750 to < 5.250
5.500	= 5.250 to < 5.750
6.000	= 5.750 to < 6.250
6.500	= 6.250 to < 6.750
7.000	= 6.750 to < 7.250
7.500	= 7.250 to < 7.750
8.000	= 7.750 to < 8.250
8.500	= 8.250 to < 8.750
9.000	= 8.750 to < 9.250
9.500	= 9.250 to < 9.750
10.000	= 9.750 to < 10.250
10.500	= 10.250 to < 10.750
>= 11.000	>= 10.750

4	**Attribute:**	**Cohort Current UPB**
	Definition:	The sum of the current investor unpaid principal balance for all securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	17

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	Format:	14.2
	Valid Values:	
	Notes:	Uses prior month factor data to calculate the upcoming factor. For instance, use January factor data when calculating the Cohort Current UPB for the February factor.
	Calculation:	Sum (Current Investor Security UPB) for all pools in the cohort

5	**Attribute:**	**Cohort WA Current Interest Rate**
	Definition:	The weighted average current interest rate of the cohort, based on the securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	6
	Format:	2.3
	Valid Values:	
	Notes:	• Rounded to the 3rd decimal • Uses prior month factor data to calculate for the upcoming factor. For instance, use the January factor security investor UPB and weighted average interest rates when calculating the Cohort WA Current Interest Rate for the February factor.
	Calculation:	Sum ((WA Interest Rate)*(Current Investor Security UPB)) / Sum (Current Investor Security UPB) for all pools in cohort. For ARM securities, the WA Interest Rate for each security contributing to the cohort is determined by calculating the spread between the WA Issuance Interest Rate and the WA Issuance Net Interest Rate. That calculated spread is then added to the WA Net Interest Rate for the current month.

6	**Attribute:**	**Cohort WA Current Remaining Months to Maturity**
	Definition:	The weighted average current remaining months to maturity of the cohort, based on the securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	3
	Format:	
	Valid Values:	
	Notes:	• Rounded to nearest integer • Uses prior month factor data to calculate for the upcoming factor. For instance, use the January factor security investor UPB and WA Current Remaining Months to Maturity when calculating the Cohort WA Current Remaining Months to Maturity for the February factor.
	Calculation:	• Sum ((WA Remaining Months to Maturity)*(Current Investor Security UPB)) / Sum (Current Investor Security UPB) for all pools in cohort

7	**Attribute:**	**Cohort WA Current Loan Age**
	Definition:	The weighted average current loan age of the cohort, based on the securities contributing to the cohort.
	Data Type:	Numeric
	Max Length:	3
	Format:	
	Valid Values:	

	Notes:	• Rounded to nearest integer • Uses prior month factor data to calculate for the upcoming factor. For instance, use the January factor security investor UPB and WA Current Loan Age when calculating the Cohort WA Current Loan Age for the February factor.
	Calculation:	Sum ((WA Loan Age)*(Current Investor Security UPB)) / Sum (Current Investor Security UPB) for all pools in cohort

8	Attribute:	Date
	Definition:	Represents the calendar day that the data is associated to.
	Data Type:	Numeric
	Max Length:	8
	Format:	YYYYMMDD
	Valid Values:	
	Notes:	Payoff activity is included in the DPR after it has completed processing, which may be after the actual payoff date. This may result in the report showing payoff activity over a weekend.
	Calculation:	

9	Attribute:	Factor Date
	Definition:	The factor date used to calculate data reported for any given calendar day represented in the report.
	Data Type:	Numeric
	Max Length:	8
	Format:	YYYYMM
	Valid Values:	
	Notes:	
	Calculation:	

10	Attribute:	Principal Reduction Amount
	Definition:	Represents the amount of full voluntary prepayments for loans contributing to the cohort for the reported calendar day.
	Data Type:	Numeric
	Max Length:	15
	Format:	12.2
	Valid Values:	
	Notes:	
	Calculation:	Sum (Current Investor UPB for loans with voluntary prepayment activity)

11	Attribute:	Cumulative Principal Reduction Amount
	Definition:	Represents the cumulative amount of full voluntary prepayments for loans contributing to the cohort through the reported calendar day.
	Data Type:	Numeric
	Max Length:	15
	Format:	12.2
	Valid Values:	
	Notes:	Inclusive of cumulative prepayment activity through the reported calendar day, starting with BD2 to the current date.
	Calculation:	Sum (Principal Reduction Amount for Day 1) + (Principal Reduction Amount for Day 2), etc.

12	Attribute:	**Unscheduled Principal Reduction Amount**
	Definition:	For loans contributing to the cohort, this represents the next scheduled principal balance of loans with full voluntary prepayment activity for the reported calendar day.
	Data Type:	Numeric
	Max Length:	15
	Format:	12.2
	Valid Values:	
	Notes:	
	Calculation:	Next Scheduled Principal Balance for all loans in the cohort: $[\text{Beginning Balance}] * \{[(1+ \text{Current Interest Rate}/12)^{\text{starting RMM}} - (1+\text{Current Interest Rate}/12)^{\text{Number months in time period}}] / [(1+\text{Current Interest Rate}/12)^{\text{starting RMM}} - 1]\}$ • Beginning Balance = Current Investor Loan UPB for the most recently disclosed factor • Current Interest Rate = Disclosed value for the most recent factor. For ARMs, calculate the spread between the Issuance Interest Rate minus the Issuance Net Interest Rate. The spread should be added to the Current Net Interest Rate. • Current Remaining Months to Maturity (RMM) = Disclosed value for most recent factor • Number of Months in time period = 1 • Round all loan level outputs to the 2nd decimal (nearest) •

13	Attribute:	**Cumulative Unscheduled Principal Reduction Amount**
	Definition:	For loans contributing to the cohort, represents the cumulative next scheduled principal balance of loans with full voluntary prepayment activity through the reported calendar day.
	Data Type:	Numeric
	Max Length:	15
	Format:	12.2
	Valid Values:	
	Notes:	Inclusive of cumulative prepayment activity through the reported calendar day, starting with BD2 to the current date.
	Calculation:	Sum (Unscheduled Principal Reduction Amount for Day 1) + (Unscheduled Principal Reduction Amount for Day 2), etc.

14	Attribute:	**SMM (Single Monthly Mortality)**
	Definition:	The monthly prepayment rate of the cohort on the reported date.
	Data Type:	Numeric
	Max Length:	8
	Format:	1.6
	Valid Values:	
	Notes:	Rounded to the 6th decimal (nearest)
	Calculation:	SMM = [Unscheduled Principal Reduction Amount for that day] / [Scheduled Ending Balance for the upcoming factor]

		• Scheduled Ending Balance for the upcoming factor (Calculate for each security contributing to the cohort and then aggregate to the cohort level) = [Beginning Balance] * {[$(1+ WAC/12)^{\text{starting WAM}} - (1+WAC/12)^{\text{Number months in time period}}$] / [$(1+WAC/12)^{\text{starting WAM}} - 1$] } • Beginning Balance = Current Investor Security UPB for the most recently disclosed factor. • Weighted Average Net Interest Rate = Disclosed value for most recent factor. • Weighted Average Net Interest Rate (ARMs) = calculate spread between the WA Issuance Interest Rate – WA Issuance Net Interest Rate. Add spread to the WA Net Interest Rate every month. • Weighted Average Maturity = Disclosed value for most recent factor • Number of months in time period = 1 • Round the output to 2 decimals for each security in the cohort

15	Attribute:	Cumulative SMM (Single Monthly Mortality)
	Definition:	The cumulative monthly prepayment rate of the cohort for the reporting month.
	Data Type:	Numeric
	Max Length:	8
	Format:	1.6
	Valid Values:	
	Notes:	• Rounded to the 6th decimal (nearest) •
	Calculation:	Sum (Unscheduled Principal Reduction Amount for Day 1) + (Principal Reduction Amount for Day 2), etc. / (Scheduled Ending Balance for the upcoming factor) • Inclusive of cumulative prepayments for each day beginning with the day after BD2 to current day

16	Attribute:	CPR (Conditional Prepayment Rate)
	Definition:	The annualized prepayment rate of the cohort on the reported date.
	Data Type:	Numeric
	Max Length:	5
	Format:	1.3
	Valid Values:	
	Notes:	Rounded to the 3rd decimal (nearest)
	Calculation:	CPR = $1 – (1 – SMM)^{12} * 100$ • SMM = value calculated for that day

17	Attribute:	Cumulative CPR (Conditional Prepayment Rate)
	Definition:	The cumulative annualized prepayment rate of the cohort through the reporting month.

	Data Type:	Numeric
	Max Length:	5
	Format:	1.3
	Valid Values:	
	Notes:	Rounded to the 3rd decimal (nearest)
	Calculation:	Cumulative CPR = 1 – (1 – Cumulative SMM)^{12} * 100 • Cumulative SMM = value calculated for that day

The data within the files will be sorted by:

- Security Type
- Year (ascending)
- WA Net Interest Rate (ascending)
- Date (ascending)