

Fannie Mae Benchmark CPR™ Commentary

February 2021

Key Highlights

- This month, we highlight prepayment trends observed in January. The 30-Year Benchmark CPR3 for the Fannie Mae cohort decreased 5.7% to 31.6 CPR. A similar decrease is observed in the 15-year Benchmark CPR3 metric.
 - We also observe key trends in the 30-year and 15-year historical BCPR data, focusing on the shifting composition of seller UPB across various BCPR3 percentage change buckets.
 - Using our MBS Forbearance and Delinquency Dashboard, we analyze cohorts with higher-than-average concentration of loans in active forbearance across both vintage/coupon and vintage/spec story.
 - We review transition rates between workout status categories using our MBS Transition Matrix.
 - Lastly, we utilize the Cohort Analyzer tool in Data Dynamics to feature select S-curves on various Fannie Mae 30-year cohorts.
-

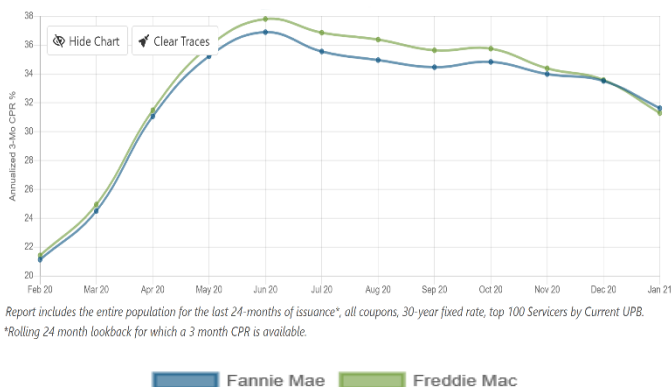
Quick Navigation

[Monthly Benchmark CPR Results](#)
[Historical Benchmark CPR Analysis](#)
[Forbearance and Delinquency Performance](#)
[S-Curves and WALA Ramps](#)
[Additional Resources](#)

Visit **Data Dynamics** to explore the tools used in this commentary.

Monthly Benchmark CPR Results

30 Year Benchmark CPR



Report includes the entire population for the last 24-months of issuance*, all coupons, 30-year fixed rate, top 100 Servicers by Current UPB.
*Rolling 24 month lookback for which a 3 month CPR is available.

Fannie Mae Freddie Mac

Exhibit 1

The January 30-year Benchmark CPR3 (BCPR3) for the Fannie Mae cohort decreased 5.7% to 31.6 CPR – from 33.5 CPR in December – which marks the third straight month the metric has declined. The January 2021 1-month component – coming in at 29.9 CPR – marked the lowest 1-month component print for the BCPR3 since February of last year when it measured 22.3 CPR (see [BCPR Historical Data](#)). It is 15.8% lower than the October 2020 1-month component it replaces in the BCPR3 calculation and 10.7% lower than the December 2020 1-month component (see [Table 1a](#)).

We continue to see a persistent rate incentive in the market and estimate that 65.4% of all mortgages – and 77.7% of conventional mortgages – remain at least 50bps in the money using 2.73% as the prevailing 30-year mortgage rate.

Table 1a. Components of Fannie Mae's 30 Year Dec and Jan BCPR Results

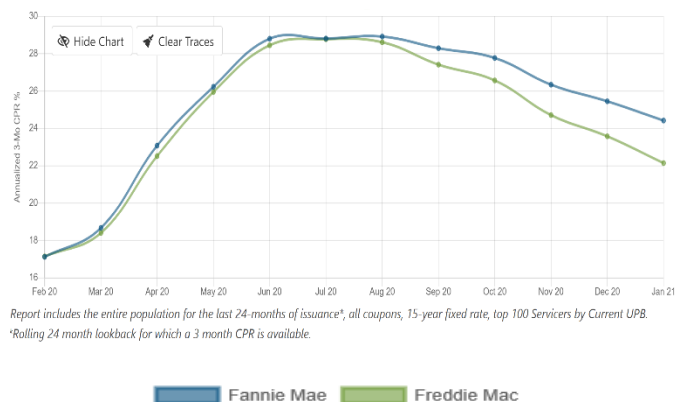
Reporting Period	BCPR3	BCPR3 Components			
		Oct	Nov	Dec	Jan
Dec 2020	33.5	35.5	31.5	33.5	29.9
Jan 2021	31.6		31.5	33.5	29.9

Table 1b. Components of Fannie Mae's 15 Year Dec and Jan BCPR Results

Reporting Period	BCPR3	BCPR3 Components			
		Oct	Nov	Dec	Jan
Dec 2020	25.5	27.4	23.8	25.3	24.2
Jan 2021	24.4		23.8	25.3	24.2

Table 1: Components of Fannie Mae's Dec and Jan BCPR Results

15 Year Benchmark CPR



Report includes the entire population for the last 24-months of issuance*, all coupons, 15-year fixed rate, top 100 Servicers by Current UPB.
*Rolling 24 month lookback for which a 3 month CPR is available.

Fannie Mae Freddie Mac

Exhibit 2

The Fannie Mae Cohort 15-year Benchmark CPR3 (BCPR3) is 24.4 CPR, which represents a 4.3% decrease from 25.5 CPR in December. The January 2021 1-month component also decreased 4.3% versus the December 2020 component and decreased substantially (11.7%) versus the October 2020 component that it replaces in the calculation. See [Table 1b](#) for the one-month components of FNM cohort 15-year BCPR3.

Historical Benchmark CPR Data

Tables 2 and 3 below provide an updated summary of key trends of the 30-year and 15-year historical BCPR data. As a reminder, historical BCPR data can be found on the [Download Data page under the MBS section of Data Dynamics](#). One notable observation from Table 2 is the shift in the metric labeled **Share of Seller UPB with 0-5% MoM BCPR3 Increase**. The month-over-month move from 37% to 7% was a key driver of the overall decrease in the headline BCPR3 from 33.5 to 31.6 BCPR3 (-5.6%). Taking a more in-depth view of the cohort of lenders that moved *out* of the 0-5% Increase bucket this month, 67% shifted into the **0-5% Decrease** bucket and 24% shifted into the **5-10% Decrease** cohort.

Summary of Fannie Mae 30 Year Historical BCPR Data - Seller view

Metric	Jan-2021	Dec-2020	Nov-2020	Feb-2020
Cohort BCPR1	25.6	28.5	26.3	20.3
Cohort BCPR3	31.6	33.5	34.0	21.1
Cohort BCPR6	42.3	43.2	43.3	27.4
WA BCPR3 of Top 25 Sellers*	35.0	36.7	37.2	26.1
WA NR-Adjusted % of Cohort for Top 25 Sellers*	111.1	109.4	108.4	107.3
BCPR3 Range (Max-Min) for Top 100 Sellers*	47.9	51.4	51.6	69.0
WA Standard Deviation BCPR3 for Top 100 Sellers*	7.3	7.3	7.1	7.1
WA Standard Deviation BCPR3 for All Sellers	9.1	9.3	9.0	5.5
Total Current UPB (\$B)	1082	1015	961	695
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	37%	36%	33%	27%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	29%	28%	32%	46%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	15%	17%	26%	10%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	19%	19%	10%	17%
Share of Seller UPB with >10% MoM BCPR3 Increase	2%	7%	6%	3%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	3%	7%	2%	11%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	7%	37%	22%	16%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	47%	34%	51%	60%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	26%	9%	15%	4%
Share of Seller UPB with >10% MoM BCPR3 Decrease	15%	6%	6%	6%

*Note: All Seller rankings based on Seller UPB

Table 2

Summary of Fannie Mae 15 Year Historical BCPR Data - Seller view

Metric	Jan-2021	Dec-2020	Nov-2020	Feb-2020
Cohort BCPR1	20.9	21.3	19.6	15.1
Cohort BCPR3	24.4	25.5	26.3	17.1
Cohort BCPR6	34.9	36.1	36.8	20.6
WA BCPR3 of Top 25 Sellers*	26.4	27.2	28.2	19.3
WA NR-Adjusted % of Cohort for Top 25 Sellers*	114.6	112.4	112.3	112.9
BCPR3 Range (Max-Min) for Top 100 Sellers*	57.3	53.0	61.2	20.3
WA Standard Deviation BCPR3 for Top 100 Sellers*	7.1	7.2	7.8	5.0
WA Standard Deviation BCPR3 for All Sellers	9.0	9.1	9.3	6.0
Total Current UPB (\$B)	184	168	155	76
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	47%	49%	47%	41%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	9%	8%	9%	22%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	10%	11%	10%	11%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	33%	32%	33%	26%
Share of Seller UPB with >10% MoM BCPR3 Increase	7%	11%	7%	12%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	5%	5%	5%	10%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	11%	16%	10%	18%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	54%	23%	29%	34%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	8%	29%	29%	12%
Share of Seller UPB with >10% MoM BCPR3 Decrease	15%	17%	20%	14%

*Note: All Seller rankings based on Seller UPB

Table 3

New Forbearance and Delinquency Dashboards

Since the onset of the COVID pandemic, Fannie Mae has enhanced the tools available on Data Dynamics with added transparency into loan performance. Within the Forbearance and Delinquency Dashboard section, our Forbearance and Delinquency Performance report offers an aggregated picture of forbearance and delinquency concentration across our mortgage-backed securities. Users can now see how forbearance and delinquency levels have evolved over time, as well as their current concentrations across a variety of cohorts. In Exhibit 3 below, we show forbearance concentration across vintage and coupon combinations for the CL universe as of the most recent factor date¹. Cohorts highlighted in yellow have a higher-than-average concentration of loans in active forbearance (relative to the CL universe average of 3.24%), while cohorts highlighted in pink have a concentration of over 7 percent, or roughly double the average. We can see that the highest concentrations of forbearance occur in the 2018 and 2019 vintage higher coupons (4s and above).

Exhibit 3. MBS Forbearance and Delinquency Performance by Vintage and Coupon

Forb and Delq Performance | Transition Matrix | Security Detail

MBS Forbearance and Delinquency Performance

View: % Investor balance UPB | % Loan Count

Investor Balance period: February 2021 | Horizontal dimension: Vintage | Vertical dimension: Coupon | Prefix: CL | Coupon: (All) | Vintage: (Multiple values) | Story: (All)

Forbearance: % Investor balance UPB as of February 2021 in forbearance as of December 2020.

	< 2013	2013	2014	2015	2016	2017	2018	2019	2020	Grand Total
2	0.00%	5.51%	0.00%	2.90%	4.38%	7.49%	1.57%	2.23%	0.22%	0.23%
2.5	1.10%	1.60%	4.48%	4.77%	2.91%	4.60%	3.98%	3.24%	0.97%	1.14%
3	1.70%	2.23%	2.36%	2.55%	3.16%	3.67%	4.40%	4.62%	2.94%	3.10%
3.5	2.39%	3.48%	3.17%	3.88%	5.07%	4.60%	5.21%	6.62%	4.62%	4.39%
4	3.10%	4.02%	4.52%	6.03%	6.94%	7.07%	7.34%	8.14%	5.58%	6.05%
4.5	3.79%	4.96%	5.84%	5.78%	9.11%	10.00%	10.13%	10.53%	5.88%	7.98%
5	5.24%	5.23%	5.37%	3.13%	3.27%	14.70%	12.99%	12.46%	7.33%	9.51%
5.5	6.05%	3.59%	4.38%	3.23%	1.97%	0.00%	17.87%	17.79%	7.50%	12.17%
Other	4.92%	4.97%	3.96%	3.98%	3.23%	1.41%	18.52%	19.68%	0.08%	0.18%
Grand Total	2.76%	2.89%	4.24%	4.04%	4.13%	5.91%	8.07%	6.16%	1.07%	3.24%

Similarly, we can view forbearance concentration by vintage and spec story cohorts, as seen below in Exhibit 4. We can see that the highest concentration of borrowers in active forbearance as of the most recent factor date occurs in low FICO spec pools. Additionally, NY spec pools also have a significant concentration of loans in active forbearance. On the other hand, loan balance spec pools have relatively lower concentrations of loans in active forbearance.

¹ Due to reporting timing differences, forbearance status is reported with a two-month lag from the factor month; the investor balance concentrations as of Feb 2021 correspond to loans that were in forbearance as of Dec 2020. Loans that were in forbearance as of Dec 2020 but paid off in Jan 2021 would not appear in these figures.

Exhibit 4. MBS Forbearance and Delinquency Performance by Vintage and Spec Story

Forb and Delq Performance | Transition Matrix | Security Detail

MBS Forbearance and Delinquency Performance

View: % Investor balance UPB % Loan Count

Investor Balance period: February 2021 | Horizontal dimension: Story | Vertical dimension: Vintage | Prefix: CL | Coupon: (All) | Vintage: (Multiple values) | Story: (All)

Forbearance: % Investor balance UPB as of February 2021 in forbearance as of December 2020.

	85k	110k	125k	150k	175k	200k	NY	FL	TX	Investor	FICO < 700	Purchase	Non-Spec	Grand Total
< 2013	1.83%	1.93%	1.66%	2.09%	1.98%	2.18%	4.04%	2.72%	2.74%	3.47%	6.89%	3.53%	2.82%	2.76%
2013	2.14%	2.18%	1.99%	2.34%	2.15%	2.89%	5.12%	4.96%	2.57%	3.29%	7.20%	4.18%	2.85%	2.89%
2014	2.58%	2.85%	2.97%	3.13%	3.28%	3.64%	7.23%	4.58%	3.90%	5.09%	8.99%	5.00%	4.34%	4.24%
2015	2.37%	2.61%	2.59%	3.01%	3.06%	3.18%	6.68%	5.22%	3.84%	5.26%	10.34%	6.07%	3.90%	4.04%
2016	2.46%	2.77%	2.62%	3.13%	3.29%	3.59%	6.95%	9.47%	7.73%	4.14%	10.43%	8.01%	3.92%	4.13%
2017	3.48%	3.52%	3.72%	4.32%	4.49%	4.64%	8.35%	14.54%	8.18%	5.46%	11.84%	10.24%	6.04%	5.91%
2018	3.96%	4.45%	4.64%	5.61%	6.39%	6.48%	10.57%	18.11%	12.00%	7.68%	14.55%	13.00%	8.73%	8.07%
2019	3.03%	3.36%	3.21%	3.97%	4.30%	4.50%	8.47%	8.29%	8.84%	6.73%	10.58%	11.27%	6.53%	6.16%
2020	0.64%	0.65%	0.65%	0.75%	0.81%	0.83%	2.04%	1.28%	0.90%	0.71%	1.44%	3.39%	1.08%	1.07%
Grand Total	2.40%	2.49%	2.36%	2.83%	2.89%	2.92%	5.64%	2.06%	1.38%	2.44%	6.15%	8.61%	3.17%	3.24%

As borrowers have been able to resolve their COVID-related hardships, they have exited forbearance with the assistance of various repayment options. In addition, Fannie Mae has a variety of policies and tools available to help borrowers who were previously in forbearance take advantage of the historic low-rate environment to refinance or whose hardships are more permanent in nature. We can use the MBS Transition Matrix in Data Dynamics to derive insights into borrower transitions out of active forbearance. Exhibit 5 below illustrates the MBS Transition Matrix as of the most recent observation period for CL loans. We can see the month-over-month rate of transition from active forbearance into repayment options such as the repayment plan and the newly introduced payment deferral. In addition, we can see transitions into payoffs or modification trials.

Exhibit 5. MBS Transition Matrix

Forb and Delq Performance | Transition Matrix | Security Detail

MBS Transition Matrix

Click on any cell or header to filter all views to the selected cohort

View toggle: Beginning month UPB | Beginning month: November 2020 | Security Identifier: | Coupon: (All) | Vintage: (Multiple values) | Story: (All) | Prefix: CL

Forbearance status Ending month: December 2020

	Never in Forbearance	Ever in Forbearance	Payoff	Involuntary Loan Removal	Grand Total
Never in Forbearance	96.18%	0.16%	3.65%	0.01%	100.00%
Ever in Forbearance		96.45%	3.13%	0.42%	100.00%
Grand Total	89.12%	7.22%	3.61%	0.04%	100.00%

Workout status Ending month: December 2020

	Active Forbearance	Repayment Plan	Payment Deferral	Modification trial	Ever in Forbearance - No Workout	Never in Forbearance - No Workout	Payoff	Involuntary Loan Removal	Grand Total
Active Forbearance	88.04%	0.22%	4.22%	0.50%	5.44%		1.27%	0.32%	100.00%
Repayment Plan	2.51%	55.78%	1.35%	0.51%	35.41%	2.20%	2.14%	0.10%	100.00%
Payment Deferral	2.77%	0.01%	93.53%	0.05%			3.59%	0.04%	100.00%
Modification trial	6.58%	0.03%	2.06%	56.18%	7.65%	1.19%	0.91%	25.40%	100.00%
Ever in Forbearance - No Workout	1.65%	0.04%	1.74%	0.25%	90.57%		5.45%	0.30%	100.00%
Never in Forbearance - No Work..	0.16%	0.00%	0.00%	0.00%		96.18%	3.65%	0.01%	100.00%
Grand Total	3.15%	0.04%	1.61%	0.06%	2.39%	89.11%	3.61%	0.04%	100.00%

MBS Cohort Analyzer Reports

Our MBS Cohort Analyzer is a dynamic tool that enables users to perform customized prepayment analysis. This month, we feature S-curves for various Fannie Mae 30-year cohorts for different historical performance periods to see how relative prepay behavior has evolved. We highlight loan size, FICO, LTV, TPO, loan purpose, selected geographies, and occupancy performance in the snapshots below (See Exhibits 6 - 12 below). We observe that the call protection provided by loan balance paper has persisted through the refi wave (Exhibit 6), while the prepayment disparity between high and low LTV loans has largely dissipated (Exhibit 8). We can also see that NY and investor properties have retained their convexity advantage, although it has narrowed somewhat recently (Exhibits 11 and 12).

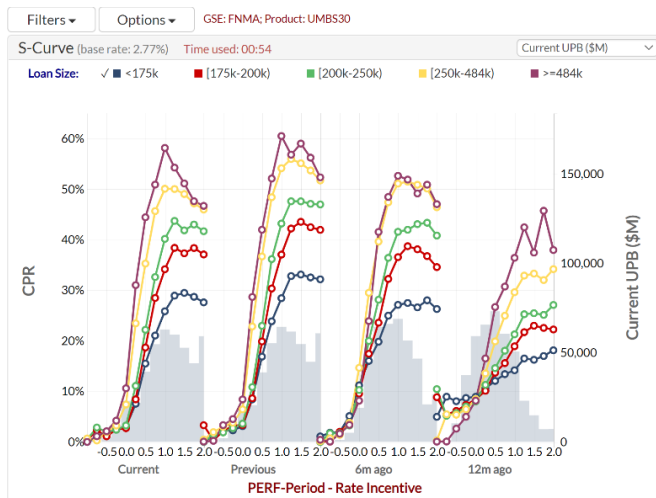


Exhibit 6: S-Curves for Loan Size Buckets Over Various Performance Periods

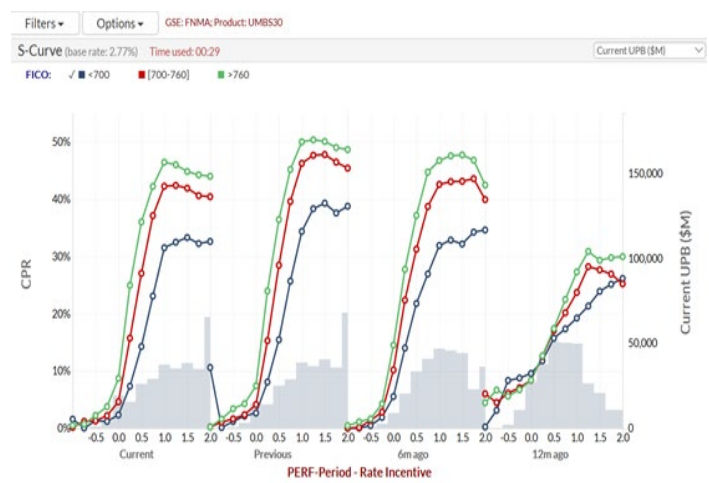


Exhibit 7: S-Curves for FICO Buckets Over Various Performance Periods

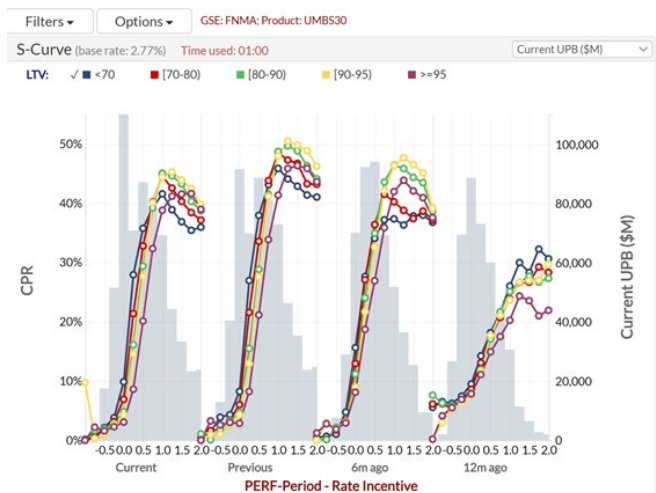


Exhibit 8: S-Curves for LTV Buckets Over Various Performance Periods

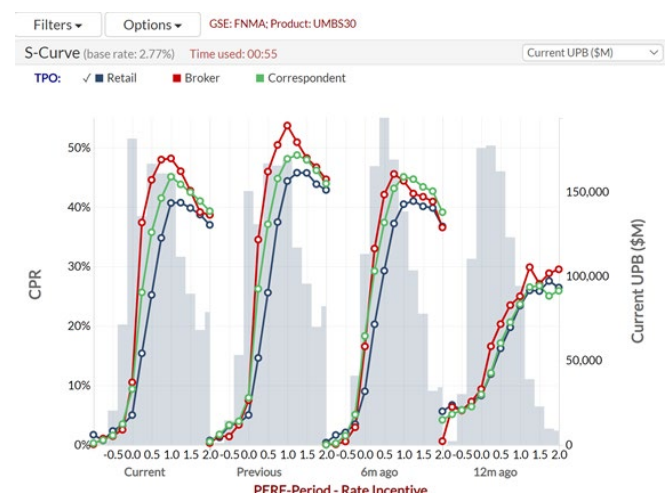


Exhibit 9: S-Curves for Channel Buckets Over Various Performance Periods



Exhibit 10: S-Curves for Loan Purpose Buckets Over Various Performance Periods

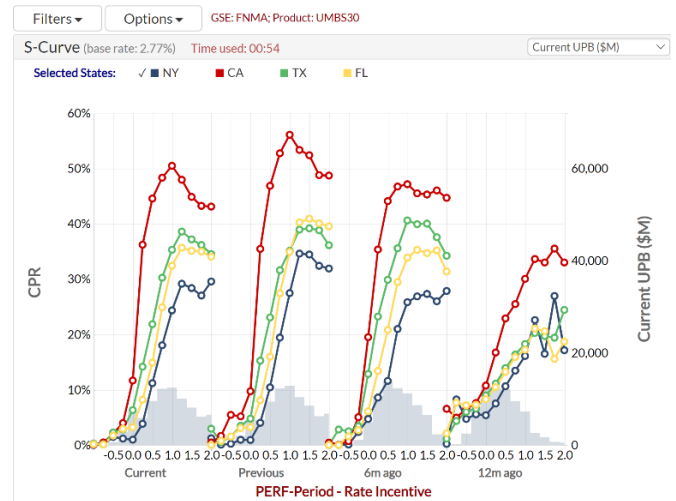


Exhibit 11: S-Curves for GEO Story Buckets Over Various Performance Periods

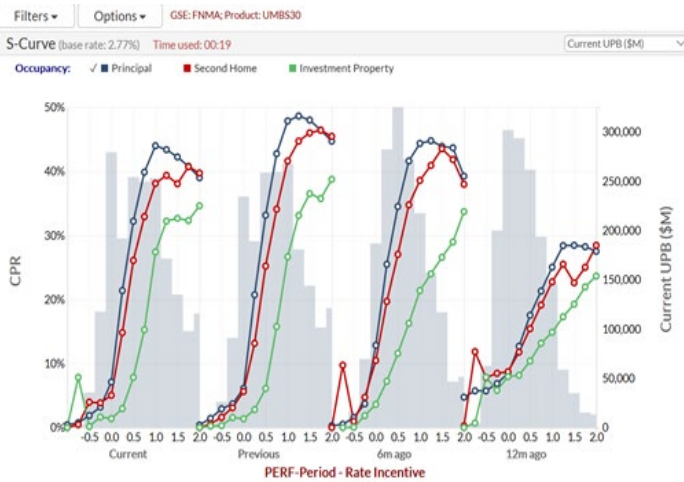


Exhibit 12: S-Curves for Occupancy Buckets Over Various Performance Periods

Additional Resources

For questions, contact the Fannie Mae Investor Help Line at 1-800-232-6643, Option 3 or by [e-mail](#).

[Benchmark CPR Dashboard](#)

[Benchmark CPR Historical Data Download](#)

[Benchmark CPR Methodology Overview](#)

[Benchmark CPR Video Tutorial](#)

[MBS Cohort Analyzer Dashboard](#)

[MBS Cohort Analyzer User Guide](#)

[MBS Cohort Analyzer Video](#)

[Data Dynamics Overview](#)

Stay Connected

[Sign up for news, commentaries, and announcements](#)

This commentary is provided by Fannie Mae solely for informational purposes based on information available at the time it is published. This document is based upon information and assumptions (including financial, statistical or historical data and computations based upon such data) that we consider reliable and reasonable, but we do not represent that such information, assumptions, data, or computations are accurate or complete, or appropriate or useful in any particular context, including the context of any investment decision, and it should not be relied upon as such. It is subject to change without notice. Fannie Mae disclaims any responsibility for updating the commentary or the opinions or information discussed herein. The opinions presented in the commentary represent the views of professionals employed by Fannie Mae of certain factors that may impact the performance of certain loans in Connecticut Avenue Securities reference pools. The effect of factors other than those assumed, including factors not mentioned, considered or foreseen, by themselves or in conjunction with other factors, could produce dramatically different performance or results. Statements in this commentary regarding the future impact of data quality improvements are forward-looking, and actual results may be materially different due to, among other reasons, those described in “risk factors” in our most recent Form 10-K and Form 10-Q. Fannie Mae does not represent that such views are the sole or most accurate explanations for loan performance or that there are not credible alternative views or opinions. Fannie Mae publishes this commentary as a service to interested parties and disclaims any liability for any errors contained herein. Fannie Mae securities are more fully described in applicable offering circulars, prospectuses, or supplements thereto (such applicable offering circulars, prospectuses and supplements, the “Offering Documentation”), which discuss certain investment risks and contain a more complete description of such securities. All statements made herein are qualified in their entirety by reference to the Offering Documentation. An offering only may be made through delivery of the Offering Documentation. Investors considering purchasing a Fannie Mae security should consult their own financial and legal advisors for information about such security, the risks and investment considerations arising from an investment in such security, the appropriate tools to analyze such investment, and the suitability of such investment in each investor’s particular circumstances.