Fannie Mae Benchmark CPR™ Commentary

April 2021

Key Highlights

- This month, we highlight prepayment trends observed in March. The 30-Year Benchmark CPR3 for the Fannie Mae cohort decreased 2.6% to 30.4 CPR. On the other hand, the 15-Year Benchmark CPR3 for the Fannie Mae cohort increased 3.2% to 25.8 CPR.

- We compare trends in the 30-year and 15-year historical BCPR data, focusing on the increasing share of seller UPB exhibiting a MoM decrease of -5 to -10% in the BCPR3.

- Utilizing the BCPR Component Profile table, we explore the shifting collateral profiles of the component populations underlying the BCPR3 and compare the most recent component profile to the overall Fannie Mae 30-year TBA-eligible universe.

- Lastly, we feature select S-curves on various Fannie Mae 30-year cohorts using the Cohort Analyzer tool in Data Dynamics.

Quick Navigation

Monthly Benchmark CPR Results

Historical Benchmark CPR Analysis

BCPR Component Profiles

MBS Cohort Analyzer Reports

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 March 30-year Benchmark CPR3 (BCPR3) for the Fannie Mae cohort decreased 2.6% to 30.4 CPR – from 31.2 CPR in February – which marks the fifth straight month the metric has declined. The March 2021 1-month component ticked 3.3% higher versus the February 1-month component but is 6.9% below the December 1-month component that it replaces in the BCPR3 calculation (see *Table 1a*).

Using a prevailing 30-year mortgage rate of 3.13%, which was 11bps higher MoM, we estimate that 42.0% of all mortgages – and 54.6% of conventional mortgages – remain at least 50bps in the money. The refinanceable share of the population continues to decline from the recent peak of 67.9% for all mortgages and 80.0% for conventional mortgages observed in late 2020.

Table 1a. Components of Fannie Mae's 30 Year Feb and Mar BCPR Results

30 Yr FNM Cohort		BCPR3 Components			
Reporting Period	BCPR3	Dec	Jan	Feb	Mar
Feb 2020	31.2	33.5	29.9	30.2	
Mar 2021	30.4		29.9	30.2	31.2

Table 1b. Components of Fannie Mae's 15 Year Feb and Mar BCPR Results

15 Yr FNM Cohort		BCPR3 Components			
Reporting Period	BCPR3	Dec	Jan	Feb	Mar
Feb 2020	25.0	25.3	24.2	25.6	
Mar 2021	25.8		24.2	25.6	27.5

Table 1: Components of Fannie Mae's Feb and Mar 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.
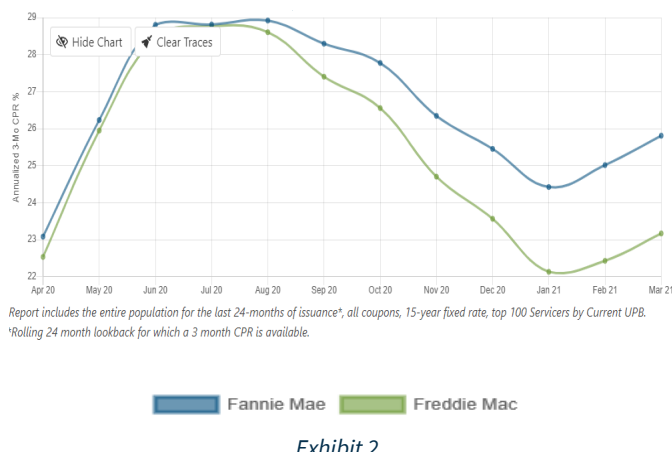
Fannie Mae   Freddie Mac

Exhibit 2

The Fannie Mae Cohort 15-year Benchmark CPR3 (BCPR3) came in at 25.8 CPR, which represents a 3.2% increase from 25.0 CPR in February. The March 2021 1-month component increased 7.4% over the February 2021 1-month component and 8.7% over the December 2020 1-month 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.

The 30y March concentration of lenders in the **% of Cohort UPB w/Note Rate Adjusted BCPR3 0-90% of Cohort** and the **90-110% of Cohort** combine to represent 64% of all lenders (shaded in green on Table 2), unchanged from last month. Share of Seller UPB that is concentrated within the +/-5% in BCPR3 categories represents 61% of the 30y population (shaded in orange on Table 2). This percentage is down from last month's 76% concentration. The change was driven by an increase of the +5-10% bucket to 22%, compared to only 7% the month prior. This shift in UPB concentration is explained by 2 large sellers with speeds that decreased approximately -7.5% and -8.5%. The concentration of 15y UPB in the 0 to +10% Increase buckets dropped by only 1% to 58% (Shaded in orange on Table 3).

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

Metric	Mar-2021	Feb-2021	Jan-2021	Apr-2020
Cohort BCPR1	37.3	26.3	25.6	33.3
Cohort BCPR3	**30.4**	**31.2**	**31.6**	**31.1**
Cohort BCPR6	40.6	41.5	42.3	30.3
WA BCPR3 of Top 25 Sellers*	33.6	34.5	35.0	32.0
WA NR-Adjusted % of Cohort for Top 25 Sellers*	111.7	112.0	111.1	104.6
BCPR3 Range (Max-Min) for Top 100 Sellers*	44.2	47.8	47.9	39.3
WA Standard Deviation BCPR3 for Top 100 Sellers*	7.0	7.2	7.3	5.0
WA Standard Deviation BCPR3 for All Sellers	8.7	9.1	9.1	6.3
Total Current UPB ($B)	**1199**	**1138**	**1082**	**686**
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	36%	37%	37%	23%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	28%	27%	29%	44%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	13%	14%	15%	30%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	22%	22%	19%	3%
Share of Seller UPB with >10% MoM BCPR3 Increase	6%	5%	2%	99%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	7%	8%	3%	0%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	28%	27%	7%	0%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	33%	49%	47%	0%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	22%	7%	26%	0%
Share of Seller UPB with >10% MoM BCPR3 Decrease	4%	5%	15%	0%

Table 2

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

Metric	Mar-2021	Feb-2021	Jan-2021	Apr-2020
Cohort BCPR1	23.7	22.3	20.9	24.2
Cohort BCPR3	**25.8**	**25.0**	**24.4**	**23.1**
Cohort BCPR6	33.5	34.1	34.9	23.4
WA BCPR3 of Top 25 Sellers*	28.0	27.2	26.4	24.9
WA NR-Adjusted % of Cohort for Top 25 Sellers*	116.3	116.2	114.6	107.9
BCPR3 Range (Max-Min) for Top 100 Sellers*	54.5	57.4	57.3	27.2
WA Standard Deviation BCPR3 for Top 100 Sellers*	7.3	7.3	7.1	5.9
WA Standard Deviation BCPR3 for All Sellers	9.3	9.3	9.0	7.4
Total Current UPB ($B)	**205**	**194**	**184**	**80**
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	48%	49%	47%	41%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	8%	7%	9%	16%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	9%	10%	10%	29%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	35%	34%	33%	13%
Share of Seller UPB with >10% MoM BCPR3 Increase	19%	14%	7%	86%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	22%	23%	5%	5%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	36%	36%	11%	2%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	13%	12%	54%	2%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	4%	6%	8%	2%
Share of Seller UPB with >10% MoM BCPR3 Decrease	5%	8%	15%	3%

Table 3

BCPR Component Profiles

The BCPR Component Profiles table breaks out the component populations of the BCPR3 and highlights the evolution of the underlying profile. As a reminder, the differentiating characteristic of the BCPR is its unique reference population: a 24-month rolling issuance window of loans with at least three months of seasoning (BCPR3). Gaining visibility into the collateral profile of each component of the BCPR3 can help market participants better understand trends in this metric.

As seen in Table 4 below, the first four records (a-d) summarize the respective collateral profiles of the Dec 20 through Mar 21 BCPR components as of the start of each respective month. In other words, each rep line represents the collateral profile that drove that component month's performance. The Dec-Feb components comprise the Feb BCPR3, while the Jan-Mar components comprise the Mar BCPR3. As the refi wave continues to evolve, we observe the predictable improvement in the population's credit profile month over month. In particular, we see a monotonic improvement in the weighted average FICO, LTV, and DTI. The weighted average WAC of the population is monotonically declining, as higher WAC loans refinance into lower rates. We also observe an increase in the weighted average loan size, consistent with rising home prices.

The bottom half of the table isolates the four sub-populations that distinguish the Feb-21 and Mar-21 component populations. Items f-g summarize the profile of loans that paid off in Mar-21 and Feb-21, respectively. Not surprisingly, loans that prepaid exhibit higher WACs than the respective component population and are more seasoned. Interestingly, the weighted average WALA of loans that paid off in Mar was slightly higher and the weighted average loan size of loans that paid off in Mar was slightly lower than what paid off in Feb, suggesting the originators may be re-focusing their efforts on more seasoned cohorts. Finally, Item h summarizes the profile of Jan-21 issuances, which replace Jan-19 issuances (summarized in Item i below), in the Mar component. The most recent month of issuance (Jan-21) to be included in the BCPR3 component exhibits a much lower WAC, higher credit quality, and lower PMM share than the most seasoned month of issuance (Jan-19) that it replaces.

Finally, we compare the most recent BCPR component profile to the overall Fannie Mae 30-year TBA-eligible universe, which is the population that many market participants focus on when analyzing monthly prepayments. Because the latter population is not limited by an issuance window, we observe that it is more seasoned than the Mar BCPR component population. The higher prepayments observed on the overall population are likely attributable to a higher weighted average WAC and weighted average original loan size.

Table 4. BCPR Component Collateral Profiles

	Orig amt ($MM)	Beg bal ($MM)	Beg loan count	WA OLS	WA WAC	WA WALA	WA FICO	WA LTV	WA DTI	% CA	% TPO	% AW	% Owner	% Investor	% Purchas	SMM	CPR
Fannie Mae BCPR																	
a. Dec component	1,073,731	1,051,830	3,992,265	268,953	3.64	9	753	76	35	20%	43%	27%	91%	5%	44%	3.3	33.5
b. Jan component	1,139,819	1,116,575	4,197,585	271,542	3.55	9	754	75	35	20%	42%	29%	91%	5%	43%	2.9	29.9
c. Feb component	1,199,189	1,174,356	4,420,741	271,264	3.47	10	754	75	35	20%	41%	30%	91%	5%	42%	3.0	30.2
d. Mar component	1,265,488	1,238,954	4,637,283	272,894	3.40	10	755	75	35	20%	40%	31%	91%	5%	41%	3.1	31.2
e. MoM profile change	66,298	64,598	216,542	1,630	-0.07	0	1	0	0	0%	-1%	1%	0%	0%	-1%	3.8%	3.2%
f. Mar pay-offs	38,388	37,168	124,658	308,269	3.82	14	753	76	35	26%	48%	28%	92%	5%	41%	100.0	100.0
g. Feb pay-offs	35,104	34,056	111,570	315,078	3.82	13	756	75	35	28%	51%	30%	93%	4%	40%	100.0	100.0
h. Jan-21 issuances	110,964	110,339	375,129	295,802	2.89	2	759	72	34	24%	36%	41%	90%	6%	34%	0.3	3.7
i. Jan-19 issuances	10,090	9,604	49,257	204,839	5.19	26	729	81	39	14%	49%	4%	87%	8%	73%	5.3	47.9
Fannie Mae universe																	
j. Mar universe	9,236,744	2,461,661	11,829,924	302,393	3.75	38	751	75	N/A	N/A	40%	19%	89%	7%	43%	3.6	35.4
k. Diff vs. Mar component	7,971,256	1,222,707	7,192,641	29,499	0.35	28	-4	0	N/A	N/A	0%	-12%	-2%	2%	2%	0.5	4.2

Note: Profile calculations use public loan-level disclosures and Fannie Mae's BCPR methodology to define populations.

MBS Cohort Analyzer Reports

Below, we continue featuring S-curves for various Fannie Mae 30-year cohorts for different historical performance periods to see how relative prepay behavior has evolved over time. Prepay sensitivity is displayed for the March activity, the previous month, six months ago and a year ago. We highlight loan size, FICO, LTV, TPO, loan purpose, selected states, and occupancy performance in the snapshots below (See Exhibits 3-9). One quick observation from the TPO chart this month (Exhibit 6) is the prepayment sensitivity for Retail and Correspondent channels increased closer to that of the Broker channel. Also worth highlighting is the Selected States chart (Exhibit 8) as the prepayment sensitivity of FL and TX moved away from NY and closer to CA. We invite readers to review our MBS Cohort Analyzer User Guide to review various ways to utilize this tool.
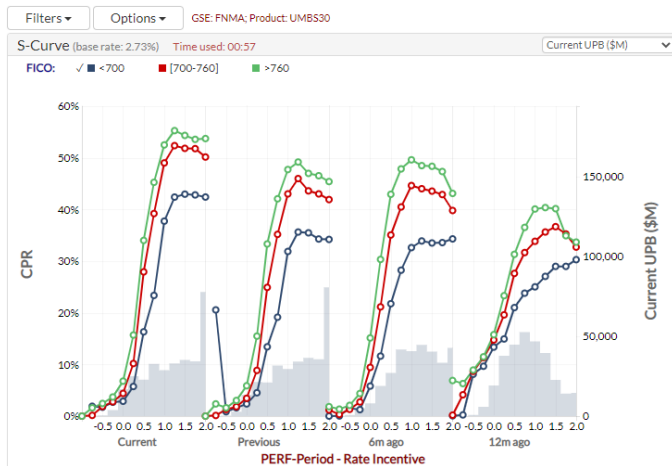
Exhibit 3: *S-Curves for FICO Buckets Over Various Performance Periods*
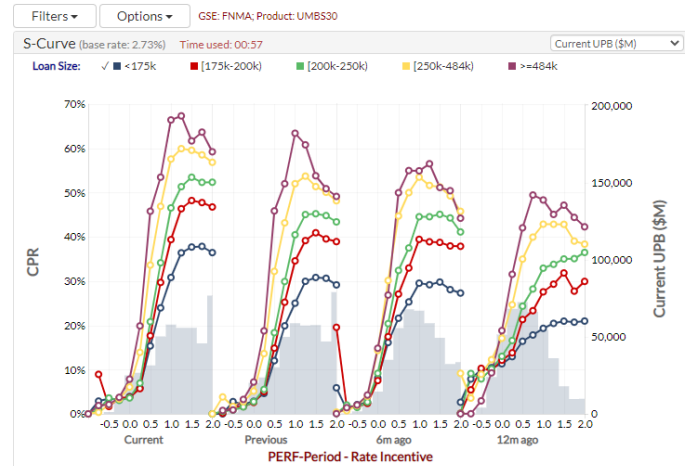
Exhibit 4: *S-Curves for Loan Size Buckets Over Various Performance Periods*
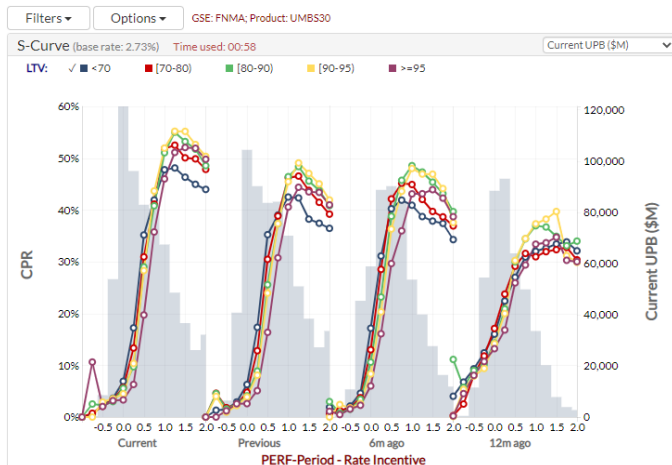
Exhibit 5: *S-Curves for LTV Buckets Over Various Performance Periods*
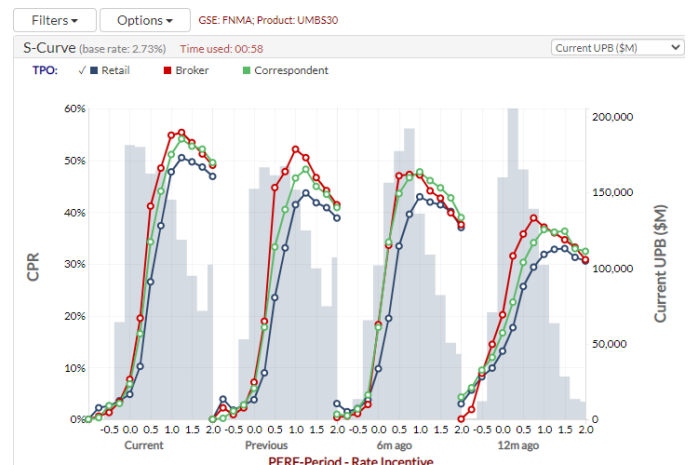
Exhibit 6: *S-Curves for Channel Buckets Over Various Performance Periods*
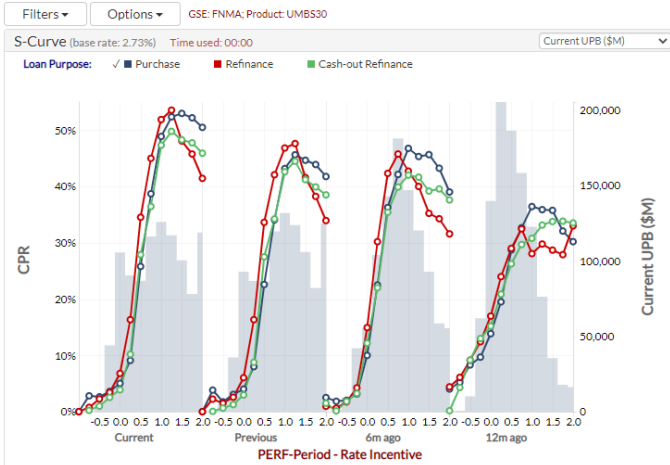
Exhibit 7: S-Curves for Loan Purpose Buckets Over Various Performance Periods
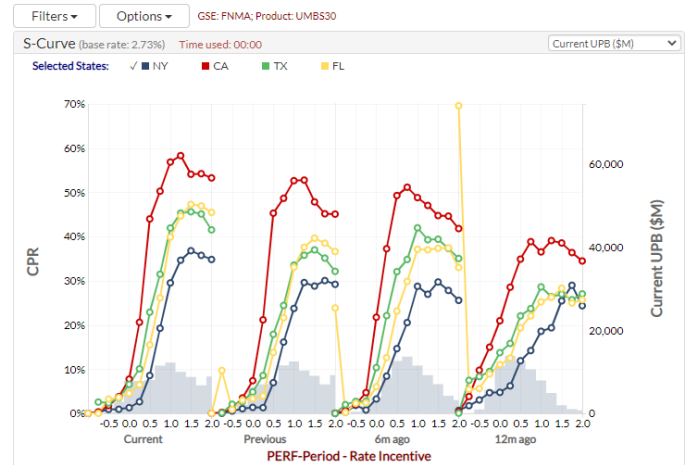
Exhibit 8: S-Curves for GEO Story Buckets Over Various Performance Periods
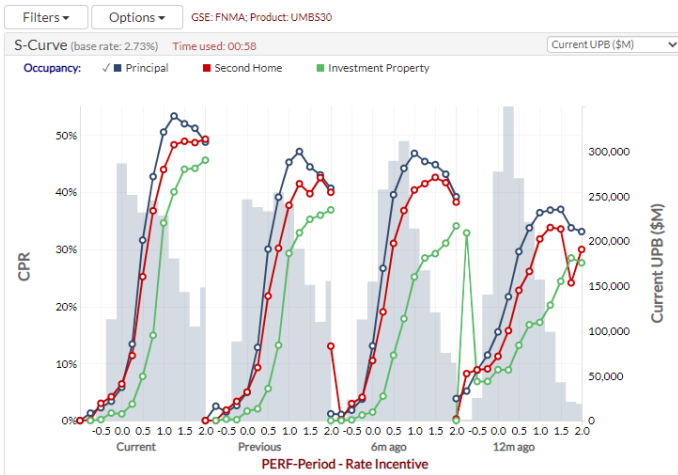
Exhibit 9: S-Curves for Occupancy Buckets Over Various Performance Periods

Additional Resources

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

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