# Data Dynamics®



# Fannie Mae Benchmark CPR<sup>™</sup> Commentary – August 2020

## **30-Year Benchmark CPR**

#### Exhibit 1



After four months of steady increases, prepayment speeds took a summer vacation and slowed down in July bucking market expectations and the persistent low rate environment - we estimate that 64% of mortgages are at least 50 bps in the money assuming 2.99% prevailing rate. Fannie Mae Cohort Benchmark CPR3 (BCPR3) came in at 35.6 CPR for the month of July, which was a 3.5% decrease from the 36.9 CPR observed in June. Individual components of the BCPR3 in Table 1 below show the slowdown in July versus April and how this drives the BCPR3 down. Last month we noted some headwinds to refinance activity via lengthening closing times and pickup in purchase money market and this appears to be manifesting itself in the slower prepayment speeds.

#### Table 1: Components of Fannie Mae's 30 Year June and July BCPR Results

Reporting Period	BCPR3	April Component CPR	May Component CPR	June Component CPR	July Component CPR
June 2020	36.9	38.5	35.6	36.7	
July 2020	35.6		35.6	36.7	34.5



## **15-Year Benchmark CPR**

#### **Exhibit 2**



Fannie Mae Cohort 15-year Benchmark CPR3 (BCPR3) remained unchanged in July from the prior month at 28.8 CPR. Similar to the 30-year sector, the July 1-month component speed showed a slowdown to 29.0 CPR versus 30.2 CPR in June.

### Heatmaps

Below we present the Benchmark CPR heatmap, a feature we previewed in prior editions of this commentary, which are now available to users as a feature embedded in the Benchmark CPR table. Each heatmap consists of two panels: the panel on the left shows the Benchmark CPR3 for the Fannie Mae reference population over the last twelve factor months, using a multicolor scale, while the panel on the right shows the outstanding UPB using a blue scale. Each heatmap cohorts the reference population across a chosen metric (Loan Size for example). Further, a simple rep line with metrics such as WAC, WALA, AOLS, is also shown for each cohort.

To access the Heatmaps, expand the desired cohort or entity and then click the Heatmap button to the right as shown in Exhibit 3 below.



#### Exhibit 3



#### Exhibit 4

F	opulation cut		Measure											1	BCPR	3 Resu	ılt							UPB 🤋	6		
1	Specified Story 💙		Absolute 🗸		<ul> <li>Absolute BCPR mat</li> <li>Absolute UPB matr</li> </ul>					s to their 1	total boo	k 🖸 2	4 9 8	5 0 S	24 26	80.0	34	e 8	9 G 3	~	4 9	∞ <u>0</u>	1 2	<u> </u>	2 22 2	6 6	3 9 2
5	Specified Story	I `										19	19		20		20		20 20	19	-	19	19	20	20	20	
I	Coupon	t (\$ MM)	Current UPB (\$	SMM)	Loan Count	Avg OLS	WAC	WALA	FICO	LTV	DTI	Aug	Sep	N N	Jan	Feb	Apr	May			Sep	No C	Dec	Jan Feb	Mar	Apr May	len un
	Avg OLS	\$11,179		\$9,612	149,495	\$66,712	4.753	10	5 734	71	34	4															
	TPO	\$18,943	S	\$15,955	166,143	\$99,127	4.583	1	5 739	72	3	5															
	Loan Purpose	\$17,853	S	514,936	129,830	\$118,450	4.506	14	4 739	75	3	5															
ES	Top States	\$39,731	ş	32,926	244,263	\$138,669	4.427	14	4 741	76	30	6															
	FICO	\$49,050	ş	\$40,099	252,180	\$163,246	4.363	13	3 742	78	30	6															
	LTV	\$62,624	ş	50,224	273,471	\$188,634	4.298	13	3 745	78	30	6															
	DTI	\$67,847	ş	53,157	255,519	\$213,424	4.247	13	3 746	79	3	6															
l	Appraisal Waiver	\$24,492	S	20,587	55,214	\$384,135	4.198	14	4 745	74	3	8															
	X	\$46,631	ş	36,023	113,962	\$326,267	4.109	12	2 746	82	30	6															
1	FL	\$42,414	S	33,528	106,694	\$323,955	4.207	12	2 744	81	38	8															
	PR	\$202		\$186	586	\$329,047	4.386	15	5 760	83	30	6															

### **Geo and Coupon**

Exhibit 5 shows the prepay performance across various top states in the Fannie cohort. Recently the prepay performance of NY, FL & TX collateral has garnered more attention from market participants with the increase in pooling and trading of this collateral. Every state listed showed in Benchmark CPR3 terms increased speeds in the Mar – Jun performance period relative to the prior four performance periods. However, the NY & FL buckets do not exhibit the same level of increases as the rest, validating the call protection of the NY & FL story pools. TX loans do offer more call protection than most of the other top states, but not to the same degree as NY & FL. PA loans appears to offer similar performance to TX. However, at nearly three times the PA volume, TX loans are more prevalent and likely more readily available to source in pool form.

#### Exhibit 5

Absolute       Absolute       Absolute UPB matrix highlights how much UPB a population cut contribute       Under the transmission cut contribute       Under transmission cut co	UPB %
AZ       \$40,027.69       \$28,450.30       121,298       \$246,470.00       4.185       11       747       78       36       Image: Constraint of the constraint o	6 8 112 12 14 16 16 16 26 22 28 28 28 28 28
CA       \$199,058.49       \$1141,314.89       404,263       \$364,458.00       4.043       10       748       70       38       56 <t< th=""><th>sep 19 Oct 19 Nov 19 Dec 19 Jan 20 Mar 20 Apr 20 May 20</th></t<>	sep 19 Oct 19 Nov 19 Dec 19 Jan 20 Mar 20 Apr 20 May 20
CO       \$47,836.82       \$33,458.42       112,284       \$309,997.00       4.060       11       752       76       36       11       76       36       11       752       76       36       11       752       76       36       11       752       76       36       11       752       76       36       11       752       76       36       11       752       76       36       11       733       80       38       11       11       743       80       38       11       11       743       80       38       11       11       743       80       38       11       11       743       80       38       11       11       743       80       38       11       11       743       80       38       11 <td></td>	
FL       \$65,284.67       \$52,794.08       236,771       \$23,287.00       4.317       13       743       80       38         GA       \$29,675.28       \$23,155.89       100,555       \$24,187.200       4.159       12       747       81       35       6       6       6         IL       \$30,071.52       \$21,732.57       104,969       \$223,617.00       4.123       12       747       81       35       6	
GA       \$29,675.28       \$23,155.89       100,555       \$241,872.00       4.159       12       747       81       35       2 <td< td=""><td></td></td<>	
IL       \$30,071.52       \$21,732.57       104,969       \$223,617.00       4.123       12       750       81       35       6 <td< td=""><td></td></td<>	
MA       \$26,562.56       \$19,145.52       6,2830       \$320,150.00       4.039       12       747       75       36       6	
MD       \$21,919.22       \$16,857.51       59,613       \$296,743.00       4.108       12       751       82       36	
MI       \$24,008.88       \$17,533.68       95,834       \$196,108.00       4.149       11       746       80       35       6       7       7       80       35       6 <t< td=""><td></td></t<>	
MN       \$22,919.50       \$17,444.42       76,960       \$23,804.00       4.076       12       752       81       35       6	
MO       \$14,388.63       \$10,383.31       56,157       \$199,493.00       4.094       11       750       80       34       61 <th61<< td=""><td></td></th61<<>	
NC       \$30,406.34       \$23,400.00       104,335       \$236,531.00       4.117       12       751       81       34       756       84       756       84       756       756       7560       7570       767       78       37       76       76       76       76       76       760       760       760       760       770       78       37       76       76       760       760       760       760       770       78       37       76       76       760       760       760       770       770       78       37       76       78       37       76       78       37       760       760       760       770       78       37       78       37       78       37       78       37       78       37       78       37       78       35       760       760       78       37	
NJ       \$27,143.14       \$20,969.45       75,660       \$290,578.00       4.132       12       747       78       37       S	
NY       \$30,414.69       \$25,779.02       92,316       \$291,156.00       4.232       14       745       74       38       28       28       28         OH       \$17,945.66       \$13,889.91       83,095       \$179,593.00       4.223       13       746       83       35       26 </td <td></td>	
OH         \$17,945.66         \$13,889.91         83,095         \$179,593.00         4.223         13         746         83         35           PA         \$23,985.50         \$18,974.81         90,432         \$222,601.00         4.158         13         750         82         35         Image: Control of the second seco	
PA \$23,985.50 \$18,974.81 90,432 \$222,601.00 4.158 13 750 82 35	
TX \$69,312.74 \$55,115.00 238,363 \$242,429.00 4.256 12 742 81 37	
VA \$29,783.32 \$22,801.17 82,182 \$292,025.00 4.076 12 755 80 35	
WA \$46,457.33 \$33,931.46 109,930 \$322,055.00 4.116 11 749 76 36	





Next, the performance of the coupon stack shows that 3.5s and 4.0s have some stabilization and marginal decline in speeds this month after steadily increasing in speeds throughout 2020. This can be observed both in the BCPR3 metric (Exhibit 6) as well as the 1-month version of the Benchmark CPR, BCPR1 (Exhibit 7).

#### Exhibit 6

Po	pulation	n cut		Measure												BCPR3 Result						UPB %							
C	Coupon 🗸			Absolute 💙		<ul> <li>Absolute BCPR mail</li> <li>Absolute UPB matrix</li> </ul>					es to their	total book	9 12	16	2 2 2	ŇŇ	30	34	0 38 0 38	44	4 2	<del>ه م</del>	9 12 1 1 1 2	<u>1 9 8</u>	2 20	0 24 26	0 28 30 32		
	ut Orig	g Amount (\$	MM)	Current UPB (	\$ MM)	Loan Count	Avg OLS	WAC	WALA	FICO	LTV	DTI	Aug 1 Sep 19	Oct 19	Nov 1	Jan 20		Mar 20 Apr 20		Jun 20 Jul 20	Aug 1		Nov 1	Jan 20	Feb 20 Mar 20	Apr 20	May 2( Jun 20		
<sup>rs</sup> 2.0	)	\$	17,702	5	\$17,486	53,654	\$328,688	3.032		3 771	1 71	31																	
2.	5	\$1	87,409	\$1	178,064	550,966	\$329,031	3.444		5 763	3 74	34																	
3.0	)	\$2	97,349	\$2	254,301	939,678	\$284,030	3.872		9 754	1 77	36																	
3.	5	\$1	73,937	\$1	122,482	531,682	\$254,852	4.363	1	3 741	80	37																	
4.0	)	\$2	20,771	\$1	121,164	558,559	\$251,289	4.762	1	9 739	80	38																	
4.	5	\$1	06,546	5	\$63,033	353,903	\$204,647	5.188	2	0 720	81	39																	
5.0	)	\$	29,116	5	\$18,645	118,618	\$177,647	5.725	2	0 702	2 81	39																	
5.	5		\$2,486		\$1,616	11,369	\$159,122	6.210	2	1 696	5 86	40																	
6.0	)		\$345		\$224	1,243	\$198,611	6.470	2	4 698	3 92	41																	

#### Exhibit 7

	Popul	lation cut		Measure												BCPF	R1 Re	sult							UPI	<b>B</b> %			
CTS	Cou	pon	~	Absolute 💙		<ul> <li>Absolute BCPR mail</li> <li>Absolute UPB matrix</li> </ul>					es to their	total book	19 12	19 16 19 18	19 20 22	19 24	20 28	m m	20 36		20 44	19 2 19 4	19 8	19 10 12 12	20 16	20 20	20 22 20 24	20 28	20 <sup>30</sup> 32
!	Cut	Orig Amou	nt (\$ MM)	Current UPB	(\$ MM)	Loan Count	Avg OLS	WAC	WALA	FICO	LTV	DTI	Aug	Sep Oct	Nov		Feb	Mar	Apr	, E	2 Inl 2	Sep	Oct	NoV NoV	Jan	Feb	Apr	May	n ·
RTS	2.0		\$72,91	5	\$72,464	218,528	\$333,132	3.008		2 77	0 71	1 32																	
1	2.5		\$292,578	3	\$282,594	907,280	\$315,784	3.418		4 76	2 74	4 34																	
ages	3.0		\$319,603	3	\$276,568	1,034,669	\$279,946	3.868		9 75	2 77	7 36																	
IRCES	3.5		\$171,040	5	\$122,280	536,430	\$251,689	4.360		12 74	0 80	37																	
	4.0		\$187,480	)	\$105,344	489,960	\$248,622	4.780		18 73	7 80	38																	
	4.5		\$85,29	5	\$51,766	292,396	\$202,443	5.210		19 71	9 80	) 39																	
	5.0		\$25,440	5	\$16,448	102,696	\$180,752	5.737		19 70	2 81	1 39																	
	5.5		\$2,32	)	\$1,527	10,848	\$157,269	6.208		20 69	7 86	5 40																	
	6.0		\$34	5	\$224	1,243	\$198,611	6.470		24 69	8 92	2 41																	

## **Additional Resources**

### **Contact Us**

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

#### Resources

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