Analytics Insights

Winding down the Fed's MBS agency portfolio

Extracting added value

March 2022

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Overview

The FOMC meeting for March will likely put an end to "new" MBS Agency purchases as it strives to reduce its $2.7 Trillion balance sheet. Currently, the monthly spend on MBS is $59.5 billion, with $10 billion of that comprised of "new" purchases and the remainder "reinvestments" of MBS paydowns.

What are the Fed's options for reducing its balance sheet, how was the current spend derived, will they pursue asset sales, and where can they find added value in their portfolio if they do?

Most likely, the immediate term means a further reduction/elimination of Fed purchases at the March 15/16 meeting, and then ultimately directing the MBS prepayments be reinvested not back into MBS but rather to Treasuries.

Contents

Executive summary

The SOMA weekly report on Federal Reserve holdings for March 2 revealed that it held MBS Agency totals of just below $2.7 trillion. FOMC pronounced at the January meeting that the “new” purchase amounts are to be $10 billion per month. Overall purchases are just inside $60 billion for the month of February ($59.5B). Therefore, there is still $50 billion being spent on reinvestments from paydowns on its existing portfolio.

The Federal Reserve and its committee members have been actively floating trial balloons to reduce their balance sheet holdings of Agency MBS. From the Fed Minutes of the January 26 meeting…

- The Committee intends to reduce the Federal Reserve's securities holdings over time in a predictable manner primarily by adjusting the amounts reinvested of principal payments received from securities held in the System Open Market Account (SOMA).
- In the longer run, the Committee intends to hold primarily Treasury securities in the SOMA, thereby minimizing the effect of Federal Reserve holdings on the allocation of credit across sectors of the economy.

What are the Fed’s options, what courses can they navigate, and what will this translate into?

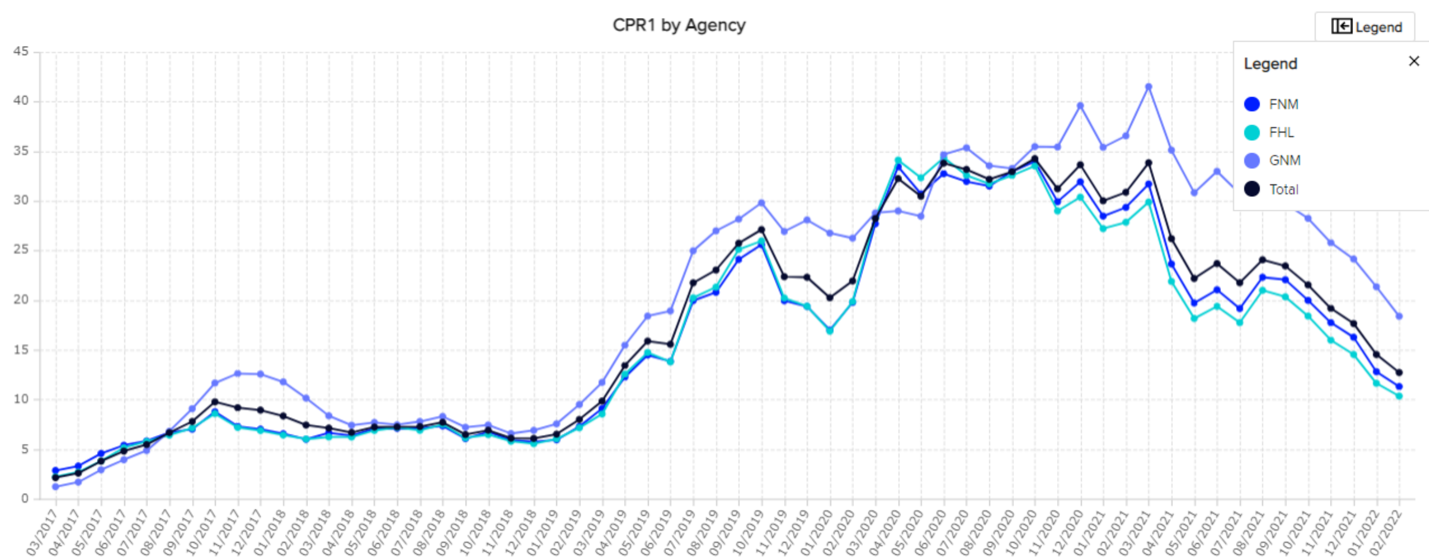
In our report, we dissected the Federal Reserve’s portfolio of Agency MBS (focusing on the two dominant segments-30y UMBS & 30y G2), and calculated prepayment paydowns by coupon and agency for the past month. We then summarized the Fed’s holdings by size, maturity, coupon, and agency, and constructed a composite; from which we determined a weighted average pool cohort that examined WAC, WAM, WAL, LTV, FICO WAC, and CPR1. Finally, exploring the “discount-to-par” nature of the portfolio, we found 20Y paper delivered into 30Y TBA, as well as some higher turnover stories off 30Y 2.5%s. This could serve to shorten the Feds extension risk as well as offering possible AFS (“available for sale”) pools just in case the Fed does intend to trim its balance sheet by other than portfolio runoff.

Reinvestment as a function of prepayments

As prepays have started to slow, this has caused reinvestments to decline as well. Fortunately, the timing is in synch to reduced originator TBA hedging and a smaller pipeline of new loans. Homeowner refinancings, which had been the main accelerant of reinvestments, are now a shrinking component of prepayments as rates rise and existing loans become more out-of-the-money. Much of that was a result of the most recent refi wave that left the MBS Index at a 2.60% coupon and a discounted dollar price to par (FTSE Russell/USBIG Mortgage index).

The exhibit below shows that prepayments peaked in Q2 2021, with GNMA speeds cresting above 40CPR. This was accomplished at a time when 10yr note rates were starting to come back off the Covid lows of 0.55% (Q220), the 30yr Current Coupon also was rebounding off its Q320 depths (1.18%), and the borrowing world was making a comeback from the nadir of the pandemic. Speeds have declined in six consecutive months since and are down -43% on GNMAs and -46% on FNMAs (FHs –48%) from those peaks.

Exhibit 1: CPR1 by agency



Source: eMBS, FNMA, FHLMC, GNMA, AMA.

Concerning January paydowns, our model revealed a total of $38.2 billion across the two major agencies (FNMA/UMBS and G2). With the bulk of the Fed's MBS portfolio in 30yr FNMA and GNMA II 2%s and 2.5%s, it's of no surprise that most of the monthly prepayments surface in those coupons as follows.

Table 1: UMBS Paydowns for January

Coupon	15yr	30yr	Other	Total
1.5	1,094,603,501.22	459,152,277.97	135,030,.07	1,553,890,809.26
2.0	1,985,263,975.29	6,022,722,645.45	39,095,507.58	8,047,082,128.32
2.5	973,342,499.10	6,562,573,764.79	165,290,161.56	7,701,206,425.45
3.0	527,583,977.15	3,715,143,621.70	62,410,315.66	4,305,137,914.51
3.5	81,094,039.10	2,468,486,319.73	23,971,036.70	2,573,551,395.53
4.0	16,637,707.21	1,747,227,232.61	1,731,767.95	1,765,596,707.77
4.5	7,189,776.72	451,748,879.95	896,628.58	459,835,285.25
5.0	13,202.40	91,582,281.26	48,877.34	91,644,361.00
5.5		44,035,016.62	35,838.56	44,070,855.18
6.0		7,367,811.90	38,912.92	7,406,724.82
6.5		763,627.21	12,526.12	776,153.33
Grand total	**4,685,728,678.19**	**21,570,803,479.19**	**293,66,603.04**	**26,550,198,760.42**

Source: FNMA, FHLMC, Yield Book.

Table 2: G2 Paydowns for January

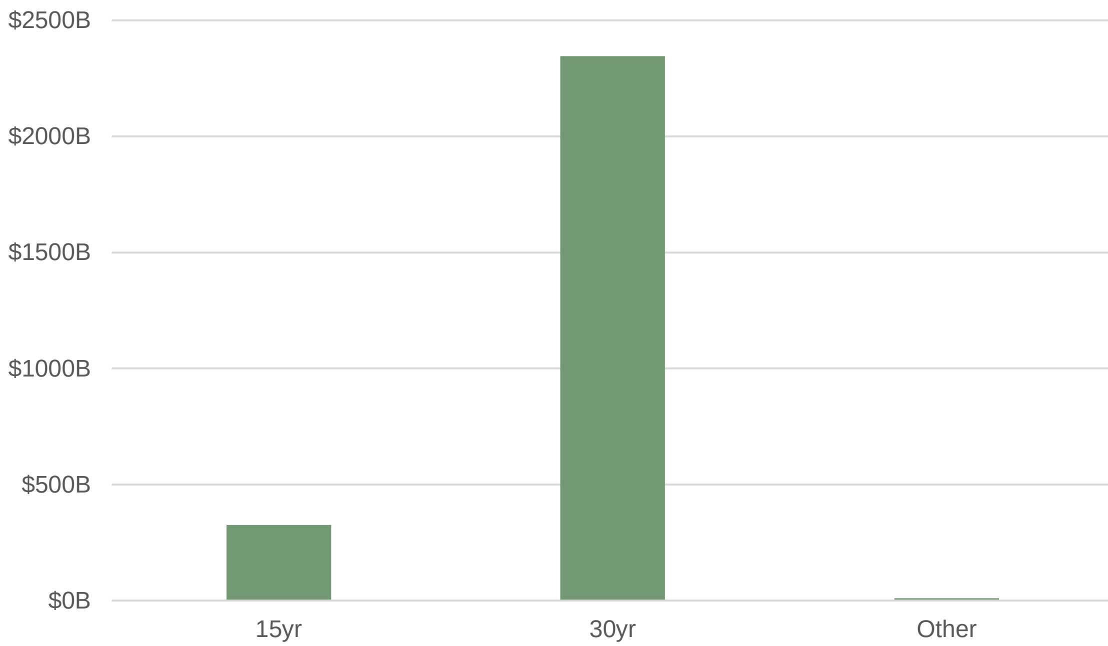
Coupon	30yr
2.0	2,205,957,126.85
2.5	4,231,796,873.40
3.0	2,502,555,839.87
3.5	1,864,937,649.31
4.0	728,584,738.42
4.5	74,597,300.55
5.0	9,299,833.95
6.0	29,022.21
Grand total	**11,617,758,384.56**

Source: GNMA, Yield Book.

What is the Fed holding?

A quick dive into Fed's MBS Agency portfolio reveals that the overriding maturities are in fact 30yr paper (see chart below). This isn't surprising as the Fed Agency MBS ops schedules revealed bi-weekly have regularly indicated this bias. Also of note, there is $9.753 billion in "Other" maturities, which we will analyze further in the "What are the opportunities for resale" section of this paper.

Exhibit 2: Fed holdings by maturity

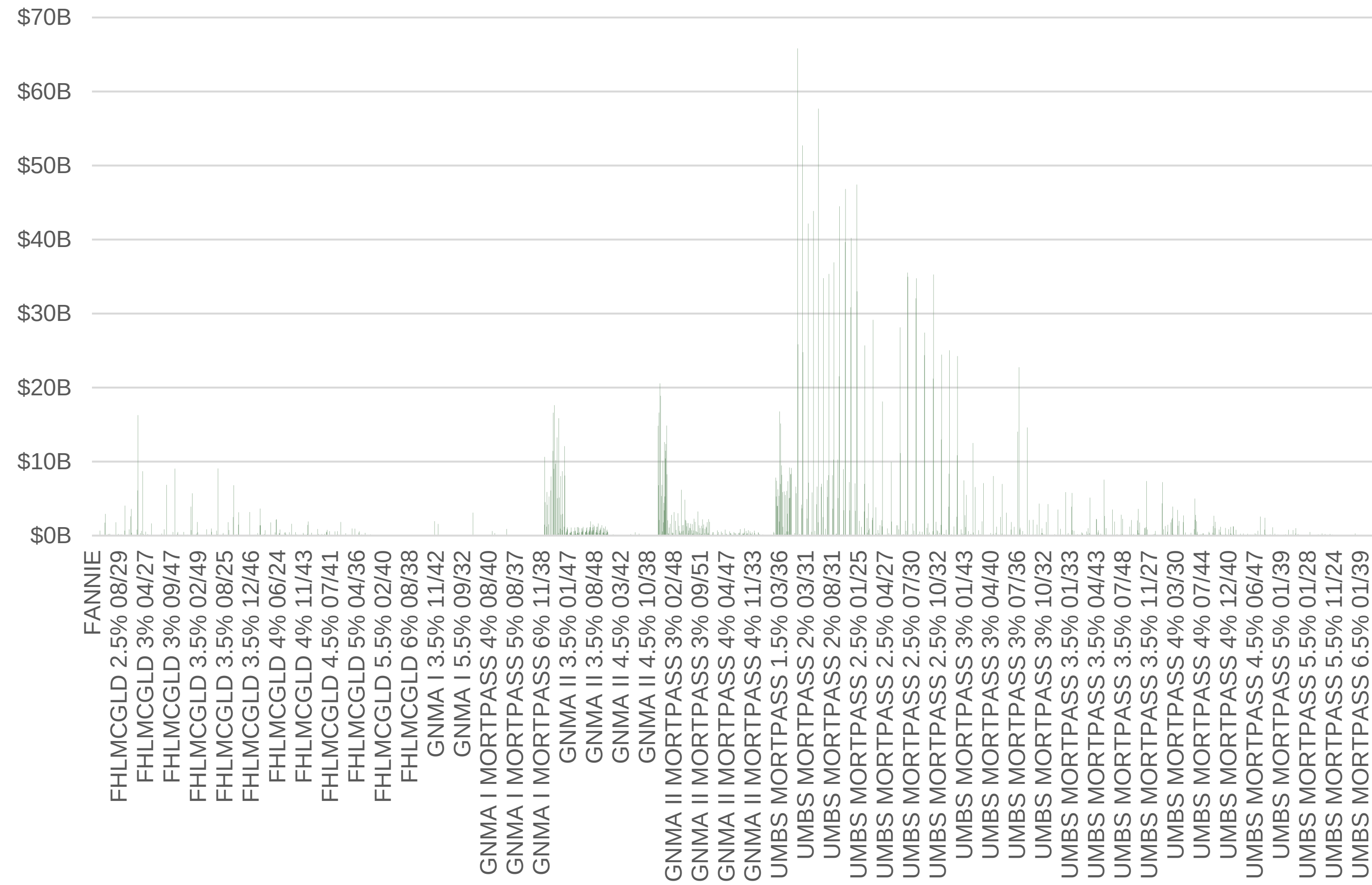


Maturity	
15yr	$326,371,010,111.96
30yr	$2,346,181,580,837.38
Other	$9,753,345,082.29
Grand total	**$2,682,305,936,031.63**

Source: FRBNY.

In the following exhibit, further delineation of the SOMA totals shows the dominant coupons are 30Y 2%s/2.5%s, the predominant Agency (or label) is UMBS, with the bulk of the 30Y purchases from 2021 (maturity 2051, 30y hence).

Exhibit 3: Fed holdings by issue



Source: FRBNY.

Fed Position vs. MBS Universe-composite sketch

Using Yield Book to summarize the Fed's position in Agency MBS, we did an overall calculation producing weighted averages for UMBS 30 and G2 30, set against the universe of MBS in those sectors. Results highlighted revealed a lower WAC, lower WALA, longer WAM, higher Loan Balance, and slightly slower prepays (likely owing to the newer paper bought in), seen in Table 3.

Table 3: February Fed positions vs MBS universe

Sector	Source	WAC	WAM	WALA	OLBAL	MAXOLBAL	LTV	FICO	CPR1
UMBS 30	Fed	3.24	332	24	384,029	11,211,449	73	758	12
	eMBS	3.38	327	27	333,000	-	74	753	13.4
	Diff	-0.14	5	-3	51,029	n/a	-1	5	-1.4
G2 30	Fed	2.99	326	28	316,721	2,370,767	92	707	20
	eMBS	3.21	321	33	304,000	-	93	700	22.6
	Diff	-0.22	5	-5	12,721	n/a	-1	7	-2.6

Source: FRBNY, eMBS, Yield Book, FNMA, FHLMC, GNMA.

What are the opportunities for resale?

An optimum allocation into a TBA contract is generic and often not to the buyer's advantage, referred to a "worst" or "cheapest to deliver." However, upon investigation we found pools delivered into the Fed's position contain intriguing stories over and above TBA.

With an ample supply of 30Y 2.5%s at our disposal, we sorted through the "Other" pools in that sector using both the Fed's SOMA report as well as Yield Book analytics.

In this first example, we focused on five (5) pools totaling $1 billion in 20Y paper that was delivered into 30Y allocations. While this does constitute "good delivery" into Class A however, it's not something you strive for. Tighter cash flows tend to price above sloppier, longer ones. For that reason, 20Y FNMA 2.5%s generally trade +1.5pts/30Y (all else holding constant).

In the Table 4, we ran the 20Y paper in the Fed's position at a 15 OAS, interpolated from 15Y OAS (21) to 30Y OAS (5). The payup to TBA was almost +1.75 points ($99-23+ v $98-00+ TBA), duration and WAL shortened 1.4 years and 3.3 years (respectively), while spread to benchmark did lose 14.4 bps (partly curve related).

Table 4: Fed's 20yr 2.5s vs TBA

	Price	Yield	Effective duration	WAL	Convexity	Spread to benchmark
fnma2.5-gen	98.015864	2.751797	5.164190	9.285032	1.001900	79.462601
nma3889	100.250559	2.433745	3.665867	5.936474	0.481600	54.978600
nma4016	99.521797	2.572284	3.715837	5.985988	0.486000	68.832603
frb5037	99.667705	2.545146	3.746456	5.859114	0.471400	66.118797
frb5036	99.692749	2.540107	3.735818	5.896844	0.473500	65.614799
frb5072	99.476707	2.579595	3.763760	6.112363	0.502000	69.563599
Avg pools	99.721903	2.534175	3.725548	5.95815	0.482900	65.021680
Diff	1.706097	-0.2176216	-1.438642	-3.326875	-0.519000	-14.440921

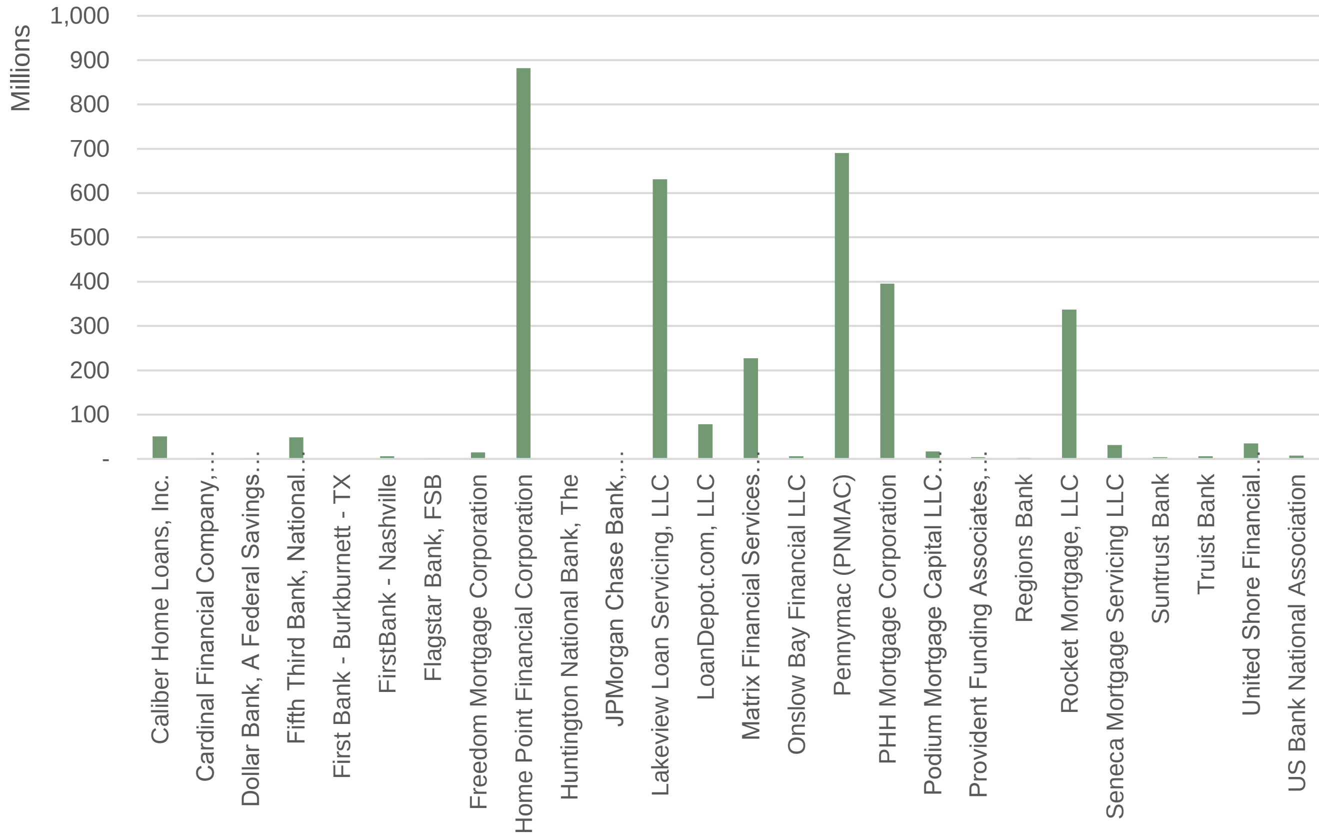
Source: FRBNY, Yield Book.

As the Fed has concentrated the bulk of its 30yr purchases on 2% and 2.5%s, the severe market selloff has left many of those bulk purchases well under par ($100.) The most sought-after pools on a premium priced portfolio are usually associated with loan balances and GEOs that preserve and maintain return on investment. This dynamic is now reversed for the Fed and shortening durations through higher turnover pools (faster prepays) are needed.

Servicers exhibiting the fastest prepay speeds are one way to meet this goal and the following chart(s) underscore this aspect. Using the largest Fed coupon just under par (FNMA 2.5%s), we have spotlighted the most prominent Servicers as well as those with the fastest prepay speeds. Most notable amongst them is Rocket Mortgage (formerly Quicken), whose aggressive speeds result in their pools pricing back from TBA on premium priced pools. In this discount scenario they are now a benefit.

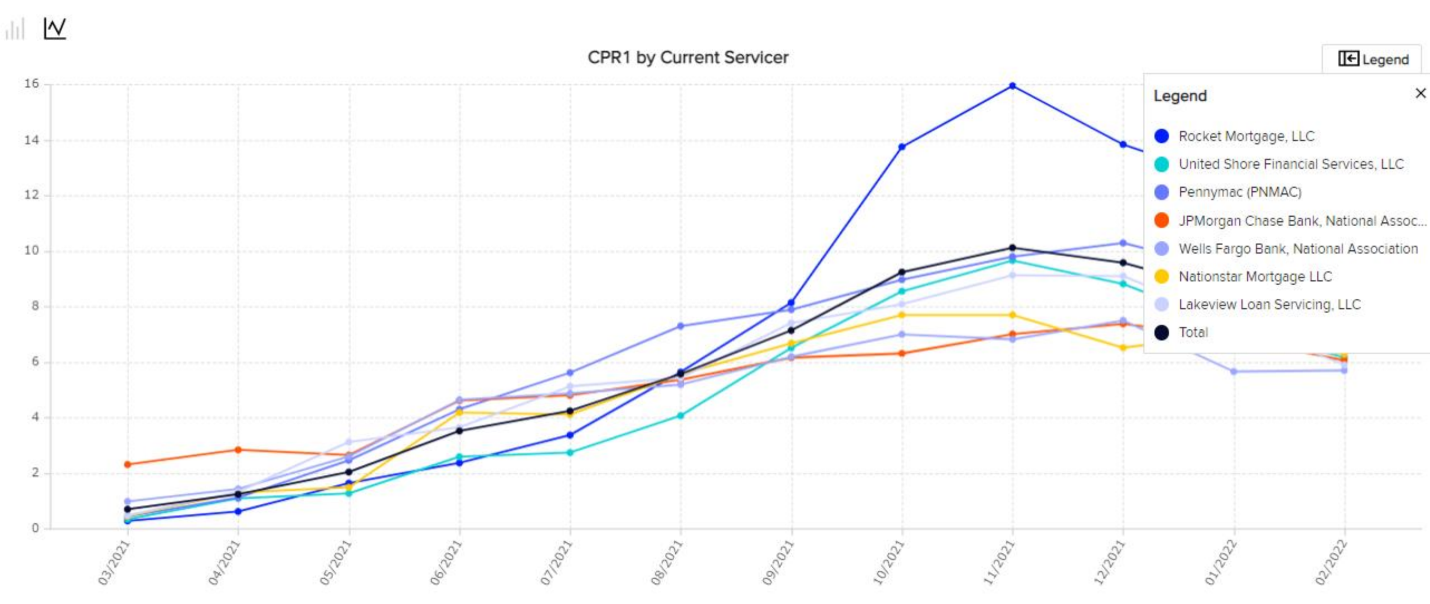
Who is servicing their bonds

Exhibit 4: Top Servicers Fed 2.5%s



Source: FRBNY, AMA.

Exhibit 5: CPR1 by current servicer



Source: eMBS, AMA.

Using Rocket Mortgage as our base case, we found 28 FNMA/UMBS 2.5% pools totaling $330 million in the Fed's position serviced by Rocket. Taking the six (6) largest pools for trading efficiency ($20mm or greater), we ran them at an even OAS to TBA on Yield Book (5OAS). The results are consistent to the above narrative; Servicer-aided higher turnover shortened duration by over ½ year, decreased the WAL by nearly one year, and increased the price on the bond to $99-09+ from the current TBA level of $98-25 (+16+/32nds). On the downside, the pools sacrifice some yield and lose 3 bps of benchmark spread, partly a curve function.

Table 5: Fed's FN 2.5s vs TBA

	Price	Yield	Effective duration	WAL	Convexity	Spread to benchmark
fnma2.5-gen	98.765877	2.657473	4.852849	8.918991	0.952400	84.326202
nbp8776	99.686793	2.538289	3.903038	6.855040	0.688000	81.185501
nqc5575	99.017243	2.618331	5.044581	9.406735	1.045199	80.412002
nbq1580	99.750421	2.527729	3.966488	6.905495	0.694000	80.079498
nbq9374	99.006338	2.626091	4.588945	8.840691	0.962100	81.188003
nbq5476	99.548928	2.563268	3.730226	6.681225	0.662699	83.683403
nqc5137	99.068124	2.615328	4.875116	9.047067	0.990800	80.111701
Avg pools	99.346308	2.581422	4.351399	7.956042	0.840466	81.110018
Diff	0.580430	-0.07605	-0.501450	-0.962948	-0.111933	-3.216183

Source: Yield Book, FRBNY.

Conclusion

- The probability is for portfolio sales to go unheeded, and runoff will take precedence on Fed unwinds as MBS prepayments roll into Treasury reinvestment
- With the bulk of the Fed's holdings materially below market value, the P&L discoveries we extracted will likely not be sizeable enough to sway the thinking toward asset sales.
- The results from our FNMA 30Y 2.5% Servicer stories can be of value to a heavily discounted market in shortening durations
- The battle between economics and market dynamics uncovered an allocations error; 20Y delivered into 30Y TBA. The upside P&L gain was worth highlighting as it shined a spotlight on the benefits garnered from attention to detail, the realities of the allocations process, and expanded use cases for a capable analytics platform.

About Yield Book

Yield Book is a trusted and authoritative source for fixed income analytics that enables market makers and institutional investors to perform complex analysis of their portfolios, benchmarks, trading decisions, historical performance, and risk. Yield Book products offer analytical insight into an extensive range of financial products in the fixed income space including governments, agencies, corporates, high yield, emerging markets, mortgages, ABS, CMBS, CMOs, and derivatives. The platform utilizes dedicated centralized servers that help ensure reliable, prompt data delivery. Yield Book forms part of London Stock Exchange Group (LSEG)'s Data and Analytics division.

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