SOFR ARMs - Attractive Investments & Protect against Rising Interest Rates

Our trading desk has offered several different SOFR ARMs over the last few quarters as issuance has grown to an acceptable level and SOFR indexed ARMs have become the standard this year, replacing LIBOR indexed ARMs as LIBOR is phased out. We believe these bonds can offer good value to clients and this Pro Shop will point out some of the attractive features we see.

FNMA ARM pool BT6766 is a SOFR ARM offered in late October. This ARM is fixed for seven years at a coupon to the investor of 1.848% and then resets every 6 months thereafter at 30 Day average SOFR + 2.132%. Below is the standard yield table we provide, the Bloomberg YT screen, at various CPRs. 15% CPR is the market standard for ARMs and is shown in the red box. We also show what happens to the yield, average life and spread when prepayment assumptions are run slower and faster. Note that the yields and spreads in all CPR scenarios, noted in the green box, represent good value in today's market.

FN BT6766 Mtge | Actions | Export | Settings | Yield Table

100% FN7SASM9 2 N | 2.478(357)1 | CUSIP 3140LVQU6 | Pool Level | As of 10/2021

10/2021	5165	P10.3	C 0.0B	Traits	SO, 30/360	Coupon	1.848%	Maturity	9/1/51	CA	19%	2021	100%
3Mo	--	--	--	09/01/2021	35,302,730	LTV/HLTV	62/62	Accrual	10/1-10/31	NY	13%		
6Mo	--	--	--	10/25/2021	34,917,345	MAXLS	822,000	Next Pay	11/25/21	TX	9%		
12Mo	--	--	--	Factor	0.98908343	WAOLS	447,956			FL	7%		
Life	5165	10.3	--	# Loans	92	SOFR30A	+2.132%	Cap 6.848%		Flr 2.132%	Mths to Reset 83		

Price-to-Yield | Current SOFR30A 0.0500

Settle	10/26/21	CF	CF	CF	CF	CF	CF	CF
Indices		C	C	C	C	C	C	C
Vary	C	10 CPR	12 CPR	14 CPR	15 CPR	20 CPR	25 CPR	30 CPR
Price	102-00+	1.63	1.57	1.52	1.49	1.34	1.19	1.04
Avg Life		7.11	6.23	5.51	5.20	4.01	3.22	2.65
Spread Duration		6.43	5.70	5.10	4.83	3.80	3.09	2.57
Prin Win	Date	11/21-7/51	11/21-7/51	11/21-7/51	11/21-7/51	11/21-7/51	11/21-7/51	11/21-7/51
	I Spread	15	21	25	27	36	39	39

Source: Bloomberg, LLC <Bond subject to change and availability>

Other positive characteristics of this particular pool we showed at the time of the offering that contributed to making this pool an attractive investment are as follows:

- $35mm pool size / 92 loans
- 13% NY / 7% FL both states typically prepay slower than average
- 19% CA which is much lower than typical ARM pools which range in the 30%-50% range
- 16% TPO
- 2.13% net margin which is on the higher side for margins
- 100% Wells Fargo loans

The larger the pool size and number of loans in the pool, the smoother the prepayment performance and the better the chances of market performance. Smaller pools with fewer loans can lead to choppy performance, which can be driven by a small number of loans in the pool.

Pools in the state of NY prepay, on average, at around 68% of the national average due to higher refinancing costs, so having a higher percentage of NY origination slows prepayments vs. pools with an average state mix. FL is also a slow-paying state at around 92% of the national average. Other slow states are CT at 77%, WV and PA at 81%, and MS at 84% (*Source: embs.com*).

CA, on the other hand, is one of the faster states at 113% of the national average so having less CA in the pool than the average mix can make the pool more attractive. Faster speeds in CA are typically driven by larger loan balance sizes. NV is also 113% and AZ, UT and CO are even faster (*Source: embs.com*).

TPO's (third party originations) have a tendency to prepay faster than retail originations as these originators tend to be more active in soliciting refinancing's. A good rule of thumb here is that the lower the TPO percentage, the better the prepayment performance.

A higher margin will, of course, result in a higher coupon at the reset date, but the margin also acts as the life floor for the pool so the higher the margin, the higher the life floor.

Better prepayment performance is also typically experienced from large retail originator such as Wells and is preferred vs. other more aggressive originators such as *Quicken* and *LoanDepot.com* as examples.

This pool has a 5% / 1% / 5% cap structure (known in the market as 5/1/5), adding to the attractiveness of this pool. The first 5% refers to the maximum the coupon can reset higher at the first reset date. The first reset cap of 5% is preferred vs. a lower cap (1% or 2% typically) so that the pool will most likely reset to a market rate. A lower (tighter) cap would only allow the coupon to reset up gradually in rising rate scenarios. The 1% represents the periodic cap after the initial reset which indicates the maximum the rate can adjust after the first reset on each subsequent reset date. This ARM resets every 6 months, which is more attractive in rising rate scenarios than pools that have annual periodic caps. With a 1% semiannual periodic cap, the maximum the coupon can reset in one year after the first reset is 2%. The last 5% represents a life cap that is 5% greater than the original coupon, or 6.848% in this case. A life cap that is 5% above the initial coupon is typically standard in the market.

The most important characteristics of ARMs, especially in the current rate environment, are that they protect against rising interest rates. One obvious way ARMs do this is that the coupon resets to a higher rate on the reset dates when rates are higher. In the case of this ARM, a 100 basis point increase in SOFR would equate to a new WAC for the borrower as follows:

1.05%	SOFR 100 basis points higher than current (SOFR is currently at 0.05%)
2.132%	Net Margin
0.63%	Servicing and guarantee fee (2.478% - 1.848%)

3.812% New WAC that borrower pays at reset, up from 2.478% at origination

The new coupon to the investor for a 100 basis point increase in SOFR would be 3.182% (1.05% SOFR + 2.132% Net Margin).

Another way ARMs protect an investor against rising interest rates is as the coupon gets closer to reset, prepayments will begin to increase on ARMs as the reality of a higher coupon and mortgage payment for the borrower becomes a reality and the opportunity to lock in a fixed rate exists. These prepayments return cash to the investor at an opportune time, when rates are higher! The amount of cash received, of course, depends on the level of prepayments. Assuming our example ARM, here are scenarios that show the amount of cash received in years 6 and 7, represented by the "Factor Change" line, as the reset date approaches.

Scenario	1	2	3	4	5
CPR Month 1-60	15.0%	15.0%	15.0%	15.0%	20.0%
CPR Month 61-72	15.0%	15.0%	30.0%	45.0%	45.0%
CPR Month 73-84	15.0%	15.0%	45.0%	60.0%	60.0%
CPR Month 85-360	15.0%	100.0%	20.0%	20.0%	20.0%
Factor @ 60 Months	0.40	0.40	0.40	0.40	0.29
Factor @ 84 Months	0.27	-	0.15	0.09	0.06
Factor Change	0.13	0.40	0.25	0.31	0.23
Yield	1.49%	1.28%	1.40%	1.35%	1.23%
Spread to Treasury	0.27%	0.33%	0.37%	0.37%	0.40%
Avg Life	5.20	3.89	4.33	4.01	3.44

- Scenario 1 is the standard 15% CPR assumption for life for comparison purposes.
- Scenario 2 is 15% CPB where the remaining loans at the first reset date are all assumed to prepay at that first reset (this typically never happens as some loans will remain outstanding).
- Scenarios 3 and 4 show two different ramp scenarios beginning in year six.
- Scenario 5 is the same as scenario 4 except the ARM prepays at 20% CPR for the first 5 years instead of 15%.
- For comparison, the estimated factor reduction for just normal housing turnover with no refinancing activity along with regular amortization would represent a factor reduction for years 6 and 7 of around 7%.

There are two takeaways from this chart:

1. In all scenarios, even in the higher prepayment scenarios, the yield and spread to treasury are attractive in today's market.
2. The Factor Change line shows the amount of cash returned to the investor in the two years leading up to the reset. For example, scenario 4 shows a factor change (reduction) of .31. This means that instead of getting 7% of your money back during this time if you owned a fixed rate bond, you get 31% of your money back to reinvest at higher rates with the ARM, and while earning an attractive return!

For more information, please contact your Country Club Bank Sales Representative.

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