Small Balance Loan Prepayments

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- This report presents a summary of Freddie Mac Multifamily Small Balance Loan (SBL) voluntary prepayment activity from December 2014 through December 2018.
- We summarize prepayment speeds in aggregate and by product type, vintage, prepayment type, prepayment phase and FRESB deal.
- Because the program only started in 2014, prepays have been slow to date, as expected. The overall mortgage prepay speed is approximately 3 CPR.
- Based on historical performance to date, we find that prepay speeds increase with loan seasoning and lower prepay penalties. As loans season and a growing population of loans move into periods with lower prepayment penalties, we expect prepayment activity to pick up.
- The focus of this report is on voluntary prepayments. There have been very few defaults in the SBL program – only $2.1 million in aggregate losses on a total securitized balance of over $18 billion in the program's history. See the most recent SBL Performance Report, available here.
- See our SB-Deal Investor Presentation for background information on the program's history, mortgage products, the Freddie Mac Optigo[SM] network and FRESB bond structure.

Freddie Mac Multifamily formally announced the SBL line of business to its lending platform in October 2014. This program targets loans between $1 million and $7.5 million and offers prepay flexibility to borrowers.

Through year-end 2018, Freddie Mac has funded and securitized over 7,000 SB loans totaling over $18.2 billion of original unpaid principal balance (UPB), with the majority of loans funding in the last two calendar years. For this report, which excludes third-party seasoned loans, the original UPB is approximately $17.6 billion, with roughly $1.2 billion of loans having prepaid.

Prepayment Options Background

We originate both hybrid ARMs and fixed-rate products across multiple loan terms, all with an array of prepayment options. SB loans generally offer more prepay flexibility than our Conventional Loans, where the standard K-Deal fixed-rate loan has a lockout period followed by defeasance.

The Freddie Mac SBL program offers borrowers prepay optionality along with a number of different products

Exhibit 1: Loan Products & Available Prepayment Options

	Hybrids			Fixed-Rate			Total % Business
Option	5H	7H	10H	5F	7F	10F	
1	54321, 1%	5544321, 1%	5544332211, 1%	54321	5544321	5544332211	53%
2	321(3), 1%	3(2)2(2)1(3), 1%	3(3)2(3)1(4), 1%	321(3)	3(2)2(2)1(3)	3(3)2(3)1(4)	9%
3	(YM or 1%) + 1%, 1%	(YM or 1%) + 1%, 1%	(YM or 1%) + 1%, 1%	YM or 1%	YM or 1%	YM or 1%	35%
4	310(3), 0%	N/A	N/A	310(3)	N/A	N/A	4%
Total % Business	39%	6%	7%	5%	7%	36%	100%

Source: Freddie Mac. We frequently use shorthand above to define the products; for example, we refer to the 5-year Hybrid as “5H” and the 10-year Fixed Balloon as “10F.”

Exhibit 1 above shows the mix of SBL products and available prepay types, along with the percentage of total origination volume across product types and prepayment options. The 5-year hybrid and 10-year fixed-rate loans are the primary products borrowers select, making up approximately 75% of our current business. It is more common to start with a 5% prepay penalty (option 1) than 3% (options 2 & 4). The second most popular prepay option is yield maintenance, especially for the 10-year fixed-rate loan. Over the past few years, we have seen the share of borrowers choosing yield maintenance increase, seen below in Exhibit 2.

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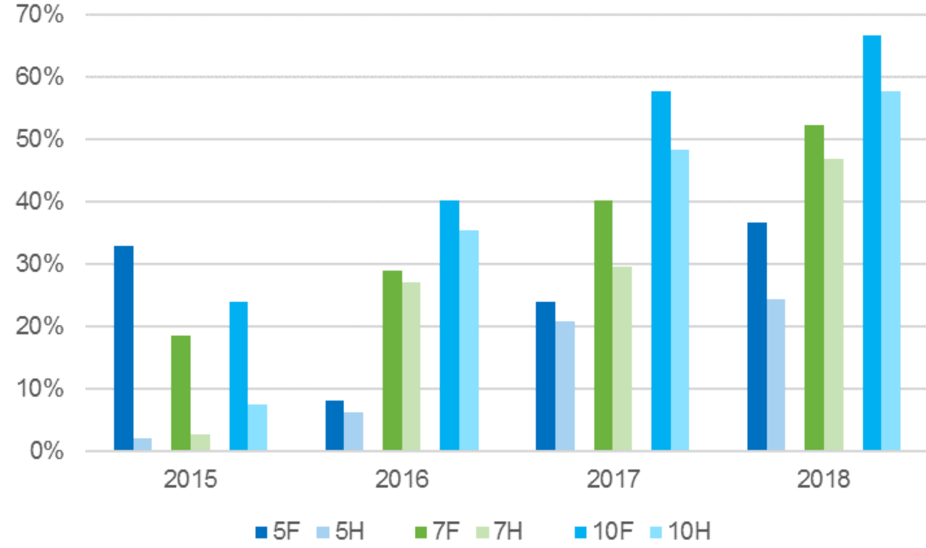
Currently, most loans would have to pay high prepayment penalties

Exhibit 2: Percentage of Active Loans with Yield Maintenance by Vintage and Product Type

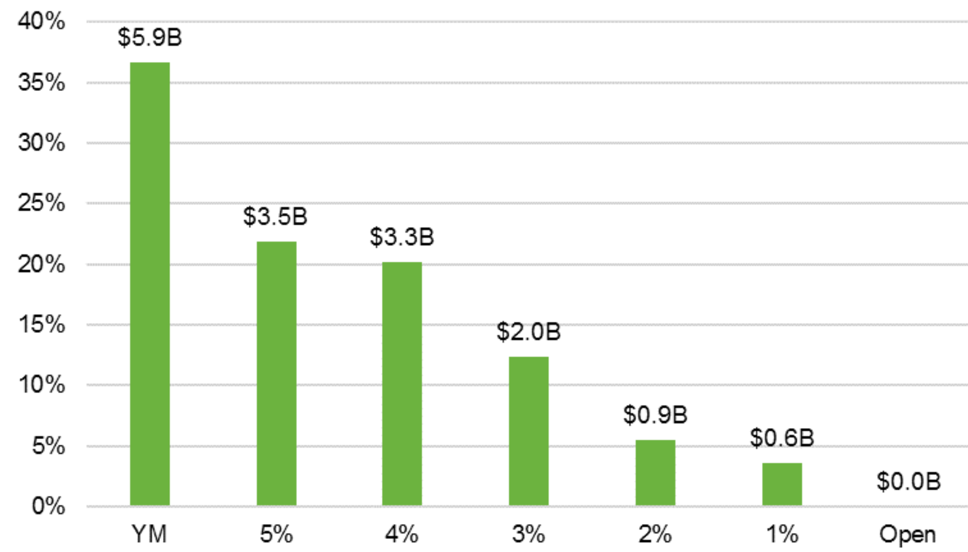


Source: Freddie Mac

A number of factors drive prepay behavior, including an incentive to prepay when rates fall or when property values rise. But a high prepay penalty would mitigate both those factors. Currently, the majority of loans are still subject to high prepay penalties, either in the form of yield maintenance or relatively high points, as shown in Exhibit 3.

In the near future, penalties on the existing book will fall, and we expect the incentive to prepay will increase

Exhibit 3: Outstanding Loan Balance by Prepayment Phase



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Source: Freddie Mac

Most longer-term loans would incur significant fees to pay off early because the SBL program is still relatively new. As of this report, no loans have reached either their balloon or hybrid changeover period. Thus, we believe it is intuitive that prepayments have been slow. The first wave of 5-year fixed maturities and 5-year hybrid changeovers are scheduled to reach those milestones in early 2020.

But with time, loans will get to the point where prepayments are more likely. By year-end 2020, approximately $600 million of loans with prepay option 4 are scheduled to enter their open period, $65 million of 5-year fixed loans are scheduled to mature, $575 million of 5-year hybrid will enter in their floating period and $2.2 billion of all mortgage types will have hit their 1% period.

Prepayment Speeds by Loan Characteristics

Given the background on the collateral and seasoning, we now turn our attention to the analysis of SBL prepay speeds. Exhibit 4 presents a summary of payoffs across prepay options, prepayment phase, vintage and product type. For additional details around FRESB loan payoffs, please reference our SB-Deal Performance Presentation.

Here we see prepay counts across a number of loan characteristics

Exhibit 4: Payoff Summary by Loan Count

Prepay Option	1	2	3	4				Totals
Loan Count	292	128	34	14				468
Prepay Phase	**YM**	**5%**	**4%**	**3%**	**2%**	**1%**	**Open**	
Loan Count	34	78	129	104	77	46	0	468
Vintage	**2015**	**2016**	**2017**	**2018**	**2019**			
Loan Count	160	207	96	5	0			468
Product	**5H**	**7H**	**10H**	**5F**	**7F**	**10F**		
Loan Count	226	24	12	48	37	121		468

Source: Freddie Mac

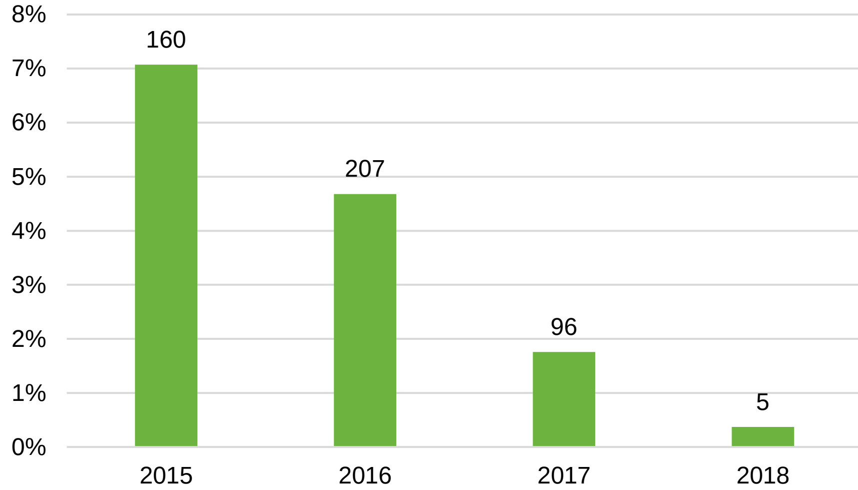
Prepays have largely come from the 2015 and 2016 vintages, as they have had time to season. Seasoned loans are more likely to prepay, whereas new vintages are much less likely to prepay.

In the following exhibits we present prepay rates across vintage and other characteristics. For example, in Exhibit 5 below, we show that prepay speeds are higher for older vintage loans, ranging from just under 5% CPR to above 7% CPR.

The downward sloping CPR curve seems intuitive given the seasoning factor

Note that they payoff count in 2016 is high relative to 2015 simply from more than double the origination volume

Exhibit 5: CPR by Origination Vintage and Payoff Loan Counts

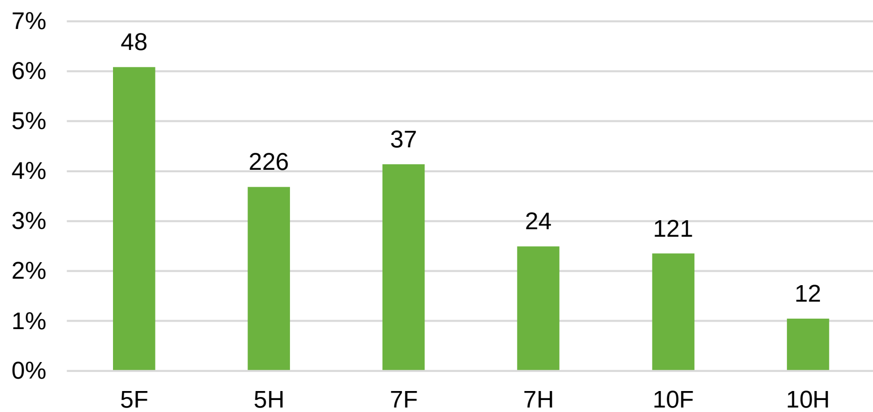


Source: Freddie Mac

Exhibit 6 below shows that there is more of a mix in prepays across product type. CPRs are fastest for the 5-year and 7-year fixed-rate products, with speeds just above 6% and 4%, respectively. However, the 5-year hybrid (5H) and 10-year fixed-rate (10F) products have seen the most prepays by count, with 226 and 121 loans, respectively, as they are by far the most common loans borrowers choose.

As with Exhibit 5 above, these results also seem intuitive, as the longer-term loans generally have more stringent prepay types

Exhibit 6: CPR by Product Type and Payoff Loan Counts



Source: Freddie Mac

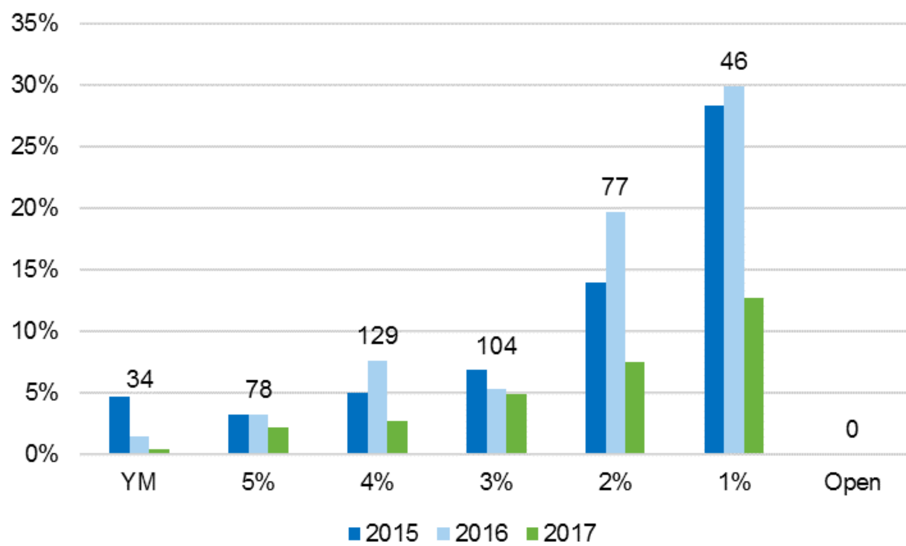
As loans season and enter lower prepayment penalty periods, we expect loans to prepay more quickly and the CPRs to increase. This is illustrated below in Exhibit 7 where we see prepayments speed up as the prepay penalty decreases. Prepayment speeds increase to around 15% when the penalty is 2% and around 30% when the penalty is 1%. Interestingly, over 200 loans have paid off with either a 4% or 5% penalty.

No loans have paid off during the open period because no loans have reached the open period.

We know from Exhibit 3 that we have a relatively small population of loans currently in the 1% period. From this small population, and because each month brings a new population of loans into the mix, we wanted to show more detail than a single bar for each prepay phase, particularly for the 1% period. Separating by vintage within each phase helps reduce cross contamination between the more seasoned loans with less seasoned loans as we believe that more seasoning (and property appreciation) will drive prepayments.

Expanding the prepay phase view with vintages split out may help explain the appearance of high CPRs

Exhibit 7: CPR by Loan Prepayment Phase and Payoff Loan Counts



Source: Freddie Mac

Exhibit 8 below lists CPRs by FRESB deal. Because the history is short and FRESB deals are more heterogenous compared with K-Deals, we observe an uneven, albeit generally downward trending prepayment history over time. As an example of this unevenness, a $33 million 5-year hybrid pool within SB44 paid off in March 2018 while those loans were still in their 5% stepdown period, inflating the deal's CPR. However, in general, the longer the deal has been outstanding, the higher the prepay rate.

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We observe uneven but generally downward sloping prepay speeds moving from older to newer deals

Exhibit 8: CPR by Deal and Loan Count

Deal	Initial UPB, $M	CPR	Paid Off Loan Count	Deal	Initial UPB, $M	CPR	Paid Off Loan Count
SB1-2015	$120	6.9%	9	SB31	$264	1.0%	2
SB2	122	14.0%	17	SB32	322	3.9%	9
SB4	192	5.9%	12	SB33	220	4.3%	7
SB5	144	11.2%	20	SB34	327	2.9%	5
SB6	202	7.5%	19	SB35	317	4.6%	9
SB7	63	11.7%	6	SB36	350	0.8%	2
SB9	445	6.7%	29	SB37	317	1.6%	4
SB10	148	5.6%	10	SB38	259	0.6%	2
SB11-2016	110	10.5%	16	SB39	264	2.2%	3
SB12	167	9.0%	13	SB40	293	3.9%	9
SB13	401	5.9%	24	SB41	311	3.6%	5
SB14	310	5.3%	17	SB42	287	0.7%	2
SB15	302	5.9%	20	SB43	325	0.5%	1
SB16	350	3.5%	14	SB44	320	7.8%	9
SB17	386	9.3%	36	SB45-2018	402	0.7%	2
SB18	118	7.0%	11	SB46	494	0.4%	1
SB20	293	3.9%	11	SB47	553	1.4%	3
SB21	94	6.1%	5	SB48	559	0.9%	2
SB22	255	5.5%	11	SB49	569	1.0%	1
SB23	342	11.3%	25	SB50	505	1.9%	2
SB24	259	3.2%	8	SB51	508	0.0%	0
SB25	233	5.9%	11	SB52	562	0.0%	0
SB26-2017	221	5.7%	9	SB53	589	0.0%	0
SB27	246	4.1%	7	SB54	538	0.0%	0
SB28	323	5.4%	12	SB55	607	0.0%	0
SB29	217	1.3%	3	SB56	564	0.0%	0
SB30	307	4.3%	13	SB57	576	0.0%	0

Source: Freddie Mac

Summary

Based on our analysis, we found lower prepay penalties and more seasoning increases the likelihood that loans prepay. Because the business has steadily grown, there are more loans in each subsequent year that are more seasoned and have lower prepay penalties. If they perform consistent with loans that have already seasoned, there is a likelihood that prepays will increase. But there are many factors that drive behavior, some of which are idiosyncratic, and we believe it is too early in the program's history to develop precise expectations for future prepayment behavior.