CREDIT RISK TRANSFER PROGRESS REPORT

Fourth Quarter 2017

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Overview of the Program

In 2012 the Federal Housing Finance Agency (FHFA) established guidelines governing single-family credit risk sharing by Fannie Mae and Freddie Mac (the Enterprises) with the intent of reducing their overall risk and, therefore, the risk they pose to taxpayers while they are in conservatorship. Fannie Mae and Freddie Mac started to implement their credit risk transfer (CRT) programs in 2013 and now transfer to private investors a substantial amount of the credit risk of new acquisitions the Enterprises assume for loans in targeted loan categories. Targeted loan categories are single-family fixed-rate mortgages with loan-to-value ratios (LTVs) greater than 60 percent and original term greater than 20 years. (HARP/Freddie Mac Relief Refinance/Fannie Mae Refi Plus loans are excluded and other minimal exclusions apply.)

The single-family CRT programs include credit risk transfers using debt issuances, insurance/reinsurance transactions, senior-subordinate securitizations, and a variety of lender collateralized recourse transactions. As outlined in the annual Conservatorship Scorecard, the Enterprises continue to innovate and experiment with different structures and attempt to expand the scope of their CRT programs as part of their efforts to further reduce credit risk where economically sensible.

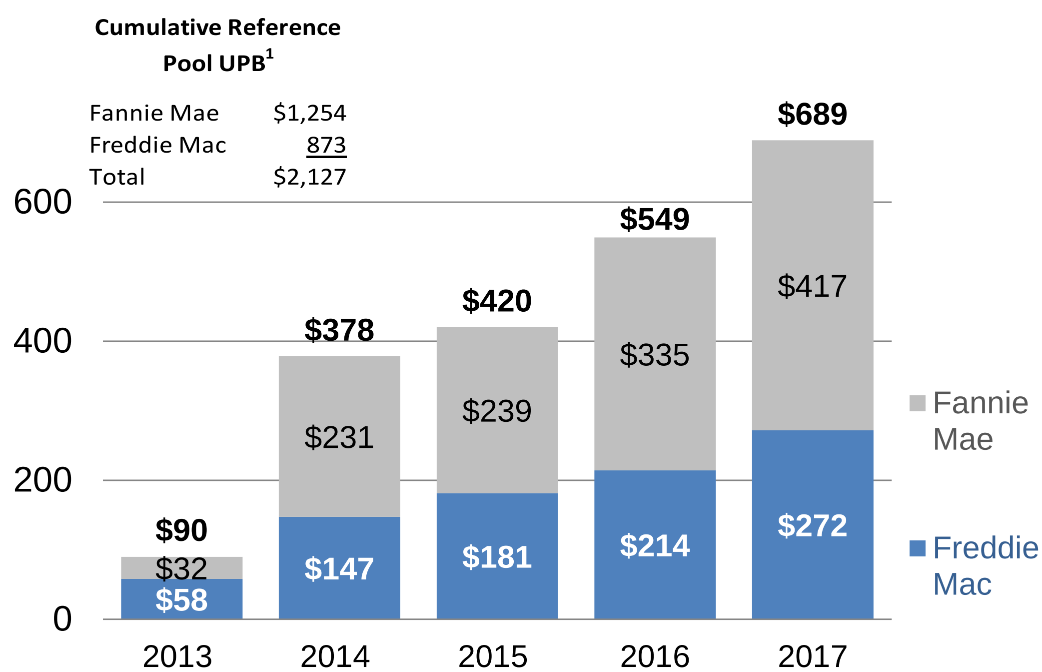
For a description of Credit Risk Transfer Structures, see Appendix A.

From the beginning of the Enterprises' Single-Family CRT programs in 2013 through the end of 2017, Fannie Mae and Freddie Mac have transferred a portion of credit risk on $2.1 trillion of unpaid principal balance (UPB), with a combined Risk in Force (RIF) of about $69 billion, or 3.2 percent of UPB. An additional $972 billion of UPB and $246 billion of RIF has been transferred to primary mortgage insurers from 2013 through the end of 2017 as described on page 4. Through CRT and mortgage insurance, the majority of the underlying mortgage credit risk on mortgages targeted for CRT has been transferred to private investors.

Enterprise Single-Family Mortgage CRT Activity, 2013 - 2017

Reference Pool UPB[1]

$ in billions



[1] The UPB shown in the table is 100 percent of each associated reference pool at issuance.

2017 Single-Family CRT Activity

In 2017, the Enterprises transferred risk on $689 billon of UPB with a total RIF of $20.6 billion. Debt issuances accounted for 69 percent of RIF, reinsurance transactions accounted for 22 percent of RIF, lender risk sharing accounted for 8 percent of RIF, and senior/subordinate transactions accounted for 1 percent of RIF.

Single-Family Credit Risk Transfer Volume, 2017
$ in millions

	Fannie Mae			Freddie Mac			Total		
	Reference Pool UPB[1]	RIF[2]	Percent of RIF	Reference Pool UPB[1]	RIF[2]	Percent of RIF	Reference Pool UPB[1]	RIF[2]	Percent of RIF
Debt Issuances	264,856	8,637	69%	248,780	5,646	70%	513,635	14,283	69%
Insurance/Reinsurance	101,574	2,339	19%	19,569	2,276	28%	121,144	4,615	22%
Lender Risk Sharing	50,875	1,591	13%	1,003	15	0%	51,878	1,606	8%
Senior/Subordinate[3]	-	-		2,413	116	1%	2,413	116	1%
Total	**417,305**	**12,567**		**271,765**	**8,053**		**689,070**	**20,620**	

1 Reference pool UPB at issuance. The same reference pool backs STACR and ACIS transactions; CAS and CIRT are backed by separate reference pools.
2 RIF represents the maximum loss exposure that could be absorbed by CRT investors.
3 Senior/Subordinate includes STACR-SPI transactions. For STACR-SPI transactions, the Reference Pool UPB represents the PCs issued by the PC Trust and the Risk-in-Force represents the sold portion of the non-guaranteed securities issued by the SPI Trust.

The Role of Primary Mortgage Insurance in Single-Family CRT Transactions

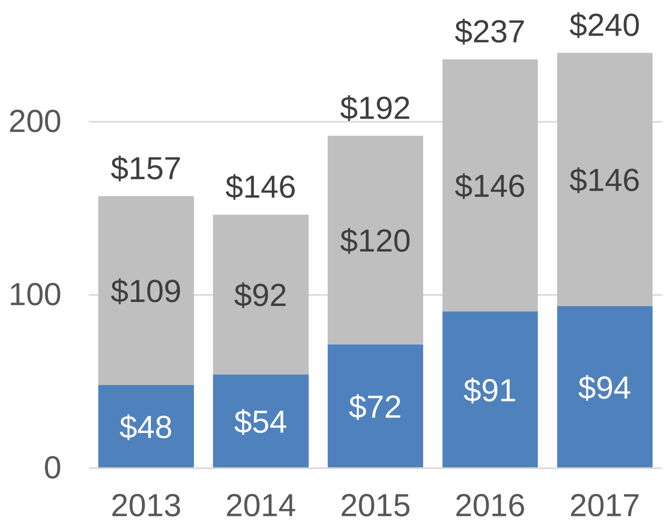
From the beginning of Fannie Mae and Freddie Mac's CRT programs in 2013 through the end of 2017, the Enterprises have transferred a portion of credit risk on approximately $2.1 trillion in single-family loans through CRT. During the same period, an additional $972 billion of credit risk has been transferred to primary mortgage insurers.

Single-family loans with LTVs above 80 percent are required to have loan-level credit enhancement in one of the following charter-eligible forms:

- Private mortgage insurance (PMI),
- Seller agreement to repurchase or replace the mortgage, or
- Seller retained participation in the loan.

PMI is the form of credit enhancement used most often. The charts below show the total UPB and RIF (measured at the time of Enterprise acquisition for each loan) of single-family loans with PMI acquired by the Enterprises between 2013 and the end of 2017. When losses occur on loans with LTVs above 80 percent, private mortgage insurers provide credit loss coverage before credit risk transfer investors or the Enterprises. However, it should be noted that the Enterprise, not the CRT investor, is typically responsible for counterparty risk when PMI coverage is provided. Therefore, if the private mortgage insurer is not able to make the payment necessary to fulfill its credit loss coverage obligations, the Enterprise must step in and cover those losses, not the CRT investor.

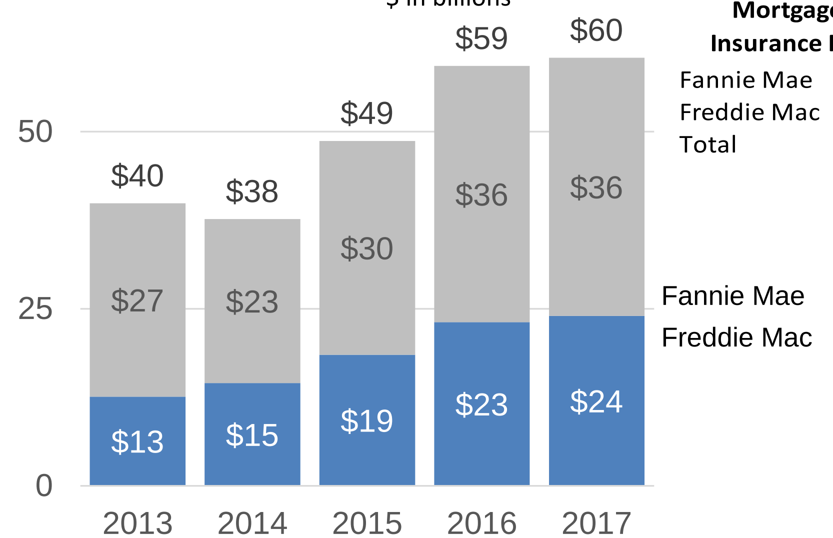
Primary Mortgage Insurance UPB Coverage for New Acquisitions
$ in billions



Cumulative Mortgage Insurance UPB

Fannie Mae	$613
Freddie Mac	359
Total	$972

Primary Mortgage Insurance RIF[1] for New Acquisitions
$ in billions



Cumulative Mortgage Insurance RIF

Fannie Mae	$153
Freddie Mac	93
Total	$246

[1] While the total RIF associated with primary mortgage insurance is large, the actual level of credit risk sharing provided through paid insurance claims depends on the number of insured loans that default and the severity of losses on those loans. These figures assume that all PMI payments would be made by the mortgage insurer, not by Fannie Mae or Freddie Mac.

Fannie Mae Single-Family CRT Transactions

In 2017, Fannie Mae transferred risk on $417 billion of UPB, with a total RIF of $12.6 billion. Debt issuances (CAS) accounted for 69 percent of total RIF of CRT issuances.

Deal Type	Deal Name[1]	Date	Reference Pool UPB[2] (in millions of $)	Risk transfer attach/detach points (in basis points)	Sold portion of tranches: Bond proceeds[3] or RIF (in millions of $)	Retained portion of tranches (in millions of $)
Credit Risk Debt Issuance						
CAS	2017-C01 (1)	01/26/17	43,758	50/375	1,351	290
CAS	2017-C02 (2)	03/22/17	39,988	50/400	1,330	270
CAS	2017-C03 (1)	05/10/17	41,246	50/400	1,371	278
CAS	2017-C04 (2)	05/31/17	30,154	50/400	1,003	204
CAS	2017-C05 (1)	07/26/17	43,751	50/375	1,351	290
CAS	2017-C06 (1)	08/23/17	16,489	50/380	517	110
CAS	2017-C06 (2)	08/23/17	15,509	50/425	553	107
CAS	2017-C07 (1)	11/21/17	20,628	50/400	686	139
CAS	2017-C07 (2)	11/21/17	13,333	50/425	475	92
Insurance/Reinsurance						
CIRT	FE 2016-1[4]	10/01/16	1,850	35/300	49	6
CIRT	2017-1	02/01/17	18,091	50/300	452	90
CIRT	2017-2	02/01/17	2,300	50/300	58	12
CIRT	2017-3	05/01/17	17,680	50/325	486	88
CIRT	2017-4	05/01/17	2,185	50/325	60	11
CIRT	2017-5	08/01/17	20,765	50/275	467	104
CIRT	2017-6	08/01/17	2,222	50/275	50	11
CIRT	2017-7	10/01/17	16,281	25/150	204	41
CIRT	FE 2017-1	01/01/17	15,000	50/300	375	75
CIRT	FE 2017-2	04/01/17	5,200	50/315	138	26
Lender Risk Sharing						
Front-End		Total 2017	39,463		1,266	
Back-End		Total 2017	11,412		325	
Senior/Subordinate						
Total 2017			**417,305**		**12,567**	**2,244**

[1]Deal names denoted with a (1) contain low LTV pools (between 60.01% and 80.00%), and deal names denoted with a (2) contain high LTV pools (between 80.01% and 97.00%).
[2]The UPB shown in the table is 100 percent of the associated reference pool at issuance.
[3]Proceeds from debt issuances will differ from face value when issued at a discount or premium.
[4]Table reflects the portion committed in 2017 and does not reflect the full commitment amount.

Fannie Mae Cumulative Single-Family Risk In Force

From 2013 through the end of 2017, Fannie Mae transferred risk on approximately $1.3 trillion of UPB, with a total RIF of $36.6 billion. Debt issuances (CAS) accounted for 78 percent of total RIF of CRT issuances.

Fannie Mae Cumulative Single-Family Risk in Force

Deal Type	Reference Pool UPB[1] (in millions of $)	Sold portion of tranches: Bond proceeds[2] or RIF (in millions of $)	Percent of RIF
Credit Risk Debt Issuance	942,011	28,473	78%
Insurance/Reinsurance	229,296	5,438	15%
Lender Risk Sharing	82,908	2,653	7%
Senior/Subordinate	-	-	
Total	**1,254,215**	**36,564**	**100%**

[1]The UPB shown in the table is 100 percent of the associated reference pool at issuance.
[2]Proceeds from debt issuances will differ from face value when issued at a discount or premium.

Freddie Mac Single-Family CRT Transactions

In 2017, Freddie Mac transferred risk on $272 billion of UPB with a total RIF of $8.1 billion. Debt issuances (STACR) accounted for 70 percent of total RIF of CRT issuances.

				Structured Agency Credit Risk (STACR)		Agency Credit Insurance Structure (ACIS)
Deal Type	Deal Name[1]	Date	Reference Pool UPB[2] (in millions of $)	Risk transfer attach/detach points (in basis points)	Sold portion of tranches: Bond proceeds[3] or RIF (in millions of $)	Insured via ACIS (in millions of $)
Credit Risk Debt Issuance						
STACR	2017-DNA1	02/07/17	33,965	0/375	802	264
STACR	2017-HQA1	02/22/17	29,659	0/425	753	252
STACR	2017-DNA2	04/11/17	60,716	0/350	1,320	440
STACR	2017-HQA2	06/20/17	31,604	50/400	788	263
STACR	2017-DNA3	10/04/17	56,151	50/350	1,200	400
STACR	2017-HQA3	10/18/17	21,641	50/450	600	222
STACR	2017-HRP1	12/13/17	15,044	75/375	183	
Insurance/Reinsurance						
ACIS	2017-4	05/01/17	10,118	0/215		168
ACIS	2017-AFRM-1	07/01/17	4,816	50/375		149
Front-End Reinsurance[4]		Total 2017	4,635	50/300	118	
Lender Risk Sharing[4]		**Total 2017**	**1,003**		**15**	
Senior/Subordinate		**Total 2017**	**2,413**		**116**	
Total 2017			**271,765**		**5,895**	**2,158**

1Deal names denoted with a DNA contain low LTV pools (between 60.01% and 80.00%), and deal names denoted with a HQA contain high LTV pools (between 80.01% and 97.00%).
[2] The same reference pool UPB is used for both debt issuance (STACR) and insurance/reinsurance transactions (ACIS).
[3]Proceeds from debt issuances will differ from face value when issued at a discount or premium.
[4]For reporting purposes, amounts are recorded under STACR.

Freddie Mac Cumulative Single-Family Risk In Force

From 2013 through the end of 2017, Freddie Mac transferred risk on approximately $873 billion of UPB, with a total RIF of $32.7 billion. Debt issuances (STACR) accounted for 73 percent of total RIF of CRT issuances.

Freddie Mac Cumulative Single-Family Risk in Force

Deal Type	Reference Pool UPB[1] (in millions of $)	Sold portion of tranches: Bond proceeds[2] or RIF (in millions of $)	Percent of RIF
Credit Risk Debt Issuance	816,523	23,890	73%
Insurance/Reinsurance	49,632	8,591	26%
Lender Risk Sharing	2,242	27	0%
Senior/Subordinate	4,156	229	1%
Total	**872,553**	**32,737**	**100%**

[1]The UPB shown in the table is 100 percent of the associated reference pool at issuance.
[2]Proceeds from debt issuances will differ from face value when issued at a discount or premium.

2017 Credit Risk Transfer Highlights

90% UPB Target

For 2017, FHFA established a Scorecard objective for the Enterprises to transfer credit risk on at least 90 percent of the UPB of their acquisitions of single-family loans targeted for credit risk transfer (CRT). Targeted loan categories are single-family fixed-rate mortgages with LTVs greater than 60 percent and original term greater than 20 years. (HARP/Freddie Mac Relief Refinance/Fannie Mae Refi Plus loans are excluded and other minimal exclusions apply.) Both Enterprises achieved this objective in 2017.

New Transaction Types

- Front-End Insurance Pilot Transactions

In 2017, the Enterprises continued to evaluate and implement new ways to transfer credit risk on newly acquired single-family mortgages. The Enterprises' front-end transactions transfer credit risk beyond that required by the Enterprises' charters. Insurers participating in front-end transactions provide collateral to mitigate counterparty risk. Participating insurers are required to adhere to the Enterprises' underwriting, loss mitigation, and claim guidelines. These provisions also significantly restrict the insurers' right to rescind, deny, or curtail coverage. In addition to the coverage provided through these transactions, loans in the pilot transactions typically have traditional primary mortgage insurance.

In 2017, Fannie Mae executed two front-end CIRT transactions with traditional reinsurers and reinsurer affiliates of mortgage insurance companies for a total commitment of $20.2 billion and RIF of $513 million, which includes a 1-year forward commitment from reinsurers providing coverage under one of the transactions. Freddie Mac executed two front-end reinsurance transactions of $8.3 billion and RIF of about $236 million, which includes a 2-year forward commitment with a panel of diversified reinsurers under one of the transactions.

Non-Targeted Loans

- HARP Loans

Freddie Mac expanded its STACR program to a new series of STACR debt notes, called SHRP. SHRP notes are backed by loans that meet the HARP eligibility criteria and have mark-to-market LTVs between 60 and 150 percent, allowing Freddie Mac to transfer risk on some of its most seasoned loans.

- 15-Year and 20-Year Loans

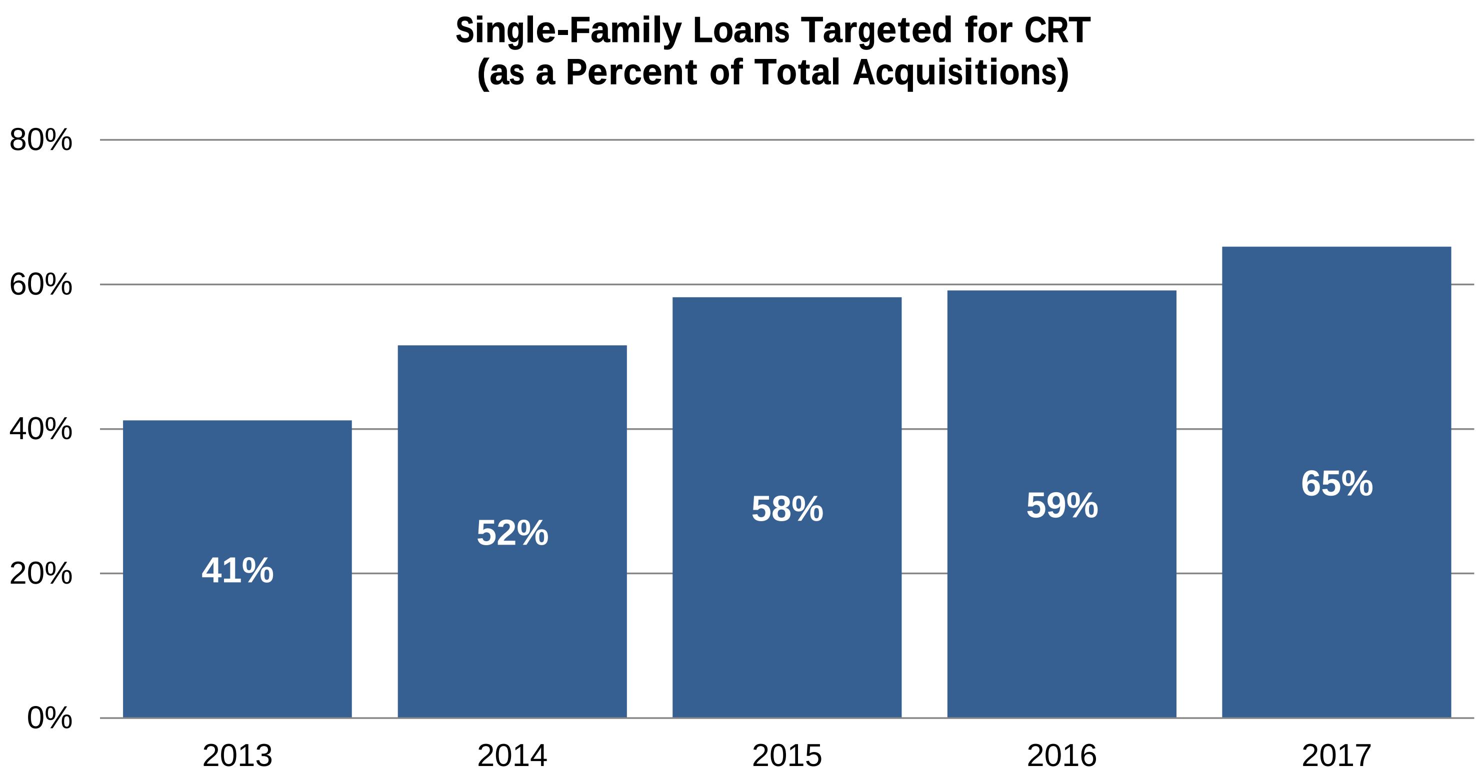
Fannie Mae executed one CIRT transaction with total UPB of $16 billion and RIF of $204 million. Freddie Mac executed one ACIS transaction with total UPB of $10 billion and RIF of $168 million.

Other Initiatives

In 2017, the Enterprises sought to address the timing mismatch, which could be years, between the accounting recognition of a credit loss on a loan covered by a CRT and the accounting recognition of the benefit provided by the CRT coverage. To address that mismatch, the Enterprises announced plans for a proposed new CRT debt issuances structure, under which transactions would be issued from a bankruptcy-remote trust that qualifies as a REMIC. This would be made possible by taking a REMIC election on the underlying loans as they are securitized into MBS. The new bankruptcy-remote trust structure would eliminate the accounting mismatch associated with direct debt issuance transactions and would also limit investor exposure to the counterparty risk from the Enterprises. By qualifying as a REMIC, the proposed structure should become more attractive to domestic REITs and foreign investors. Throughout the year, the Enterprises collaborated on this effort under the direction of FHFA.

Coverage of Single-Family Loan Acquisitions

In 2017, loans targeted for credit risk transfers represented 65 percent of the Enterprises' single-family loan production. Targeted loan categories are single-family fixed-rate mortgages with LTVs greater than 60 percent and original term greater than 20 years. (HARP/Freddie Mac Relief Refinance/Fannie Mae Refi Plus loans are excluded and other minimal exclusions apply.)



Estimating the Market-Implied Guarantee Fee

The Enterprises retain a fee from the payments received on mortgages as compensation for guaranteeing timely payment of principal and interest on the mortgage pass-through securities they issue. The guarantee fee covers two cost categories:

Non-credit costs include:

- general and administrative expenses,
- statutory payroll tax, and
- residual risks that cannot be transferred through CRT transactions (e.g., operational risk, term risk, counterparty risk).

Non-credit costs range from 25 basis points for low LTV pools to 35 basis points for high LTV pools.

Non-Credit Cost Components of the Guarantee Fee (bps)

	Low LTV	High LTV
General and administrative expense	8	8
Treasury Allocation (TCCA)	10	10
Residual risk	7	17
Total - non-credit costs	**25**	**35**

Credit costs include:

- expected costs that result from the failure of some borrowers to make their payments, and
- cost of holding the modeled capital amount necessary to protect against potentially much larger unexpected losses that result from the failure of some borrowers to make their payments in a severe stress environment.

The annual cost of holding capital to protect against unexpected losses is the amount of capital required multiplied by the target rate of return on that capital. Pricing of CRT transactions provides insight into investors' views of credit costs. This market implied credit cost for a particular tranche can be estimated as a function of:

- Tranche size,
- Credit spread paid to investors as compensation for bearing the risk, and
- Weighted average life (WAL) of each tranche and the overall collateral pool.

The size of each tranche is publicly available, as are credit spreads associated with each tranche.

Implied guarantee fees and implied credit costs are shown on the following pages, both based on 2017 transactions.

Estimated Market Implied versus Average Guarantee Fees for Fannie Mae and Freddie Mac

The implied guarantee fee from market prices in 2017 ranged between 40 to 58 bps for CAS and STACR transactions, compared to the Enterprises' average guarantee fee of 57 bps in 2016.

Fannie Mae
Guarantee Fees Implied by CAS Bond Pricing
(in bps)

	2017 C01[1]	2017 C02[1]	2017 C03	2017 C04	2017 C05	2017 C06 (1)	2017 C06 (2)	2017 C07 (1)	2017 C07 (2)
Non-credit Costs	25.0	35.0	25.0	35.0	25.0	25.0	35.0	25.0	35.0
Market implied credit cost	20.6	21.6	18.4	19.4	14.8	16.1	18.6	16.7	17.7
Market Implied Guarantee Fee	**45.6**	**56.6**	**43.4**	**54.4**	**39.8**	**41.1**	**53.6**	**41.7**	**52.7**

Freddie Mac
Guarantee Fees Implied by STACR Bond Pricing
(in bps)

	2017 DNA-1[1]	2017 HQA-1[1]	2017 DNA-2	2017 HQA-2	2017 DNA-3	2017 HQA-3	2017 HRP-1
Non-credit Costs	25.0	35.0	25.0	35.0	25.0	35.0	26.4 [2]
Market implied credit cost	18.1	22.7	17.3	18.1	16.2	19.3	26.4
Market Implied Guarantee Fee	**43.1**	**57.7**	**42.3**	**53.1**	**41.2**	**54.3**	**52.8**

Average Guarantee Fee for Fannie Mae and Freddie Mac in 2016: 57 bps

[1] Reflects current non-credit costs for comparability purposes.
[2] The 2017 HRP-1 transaction included high LTV and low LTV loans. The non-credit costs reflect a weighted average of the DNA and HQA non-credit costs.

Implied Credit Costs for Fannie Mae

Market pricing in 2017 for CAS transactions implied credit costs of 15 to 22 bps.

Credit Costs Implied by Fannie Mae CAS Bond Pricing

	2017-C01		2017-C02		2017-C03		2017-C04		2017-C05	
CAS Tranche	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)
M1	130	0.5	115	0.3	95	0.4	85	0.2	55	0.1
M2	355	7.2	365	8.7	300	5.8	285	6.8	220	4.4
B1	575	5.0	550	4.8	485	4.3	505	4.4	360	3.1
B2[1]	1,300	8.0	1,200	7.8	1,200	7.9	1,200	8.0	1,100	7.2
Implied Credit Costs		**20.6**		**21.6**		**18.4**		**19.4**		**14.8**

	2017-C06 (1)		2017-C06 (2)		2017-C07 (1)		2017-C07 (2)	
CAS Tranche	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)
M1	75	0.2	75	0.1	65	0.2	65	0.1
M2	265	5.3	280	7.6	240	5.9	250	6.7
B1	415	3.6	445	3.8	400	3.4	445	3.8
B2[1]	1,100	7.2	1,100	7.1	1,100	7.1	1,100	7.0
Implied Credit Costs		**16.1**		**18.6**		**16.7**		**17.7**

Methodology for calculating market-implied credit costs

A simplified scenario of 10 percent constant prepayment rate, 0.2 percent constant default rate, and 25 percent loss given default or loss severity are applied to calculate the weighted average life. The calculations assume that 100 percent of the notes are sold (no retention by the Enterprises).

[1] For B2 bonds not sold, the spread reflects the indication price reported in the respective prospectus.

Implied Credit Costs for Freddie Mac

Market pricing in 2017 for STACR transactions implied credit costs of 16 to 26 bps.

Credit Costs Implied by Freddie Mac STACR Bond Pricing

	2017 DNA-1		2017 HQA-1		2017 DNA-2		2017 HQA-2		2017 DNA-3	
STACR Tranche	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)
M1	120	0.6	120	0.4	120	0.7	80	0.2	75	0.3
M2	325	6.7	355	9.7	345	6.3	265	6.4	250	4.8
B1	495	4.3	500	4.3	515	4.6	475	4.2	445	3.8
B2[1]	1,000	6.5	1,275	8.2	1,125	5.7	1,200	7.3	1,100	7.3
Implied Credit Costs		**18.1**		**22.7**		**17.3**		**18.1**		**16.2**

	2017 HQA-3		2017 HRP-1	
STACR Tranche	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)	Credit Spread to LIBOR (bps)	Implied Credit Cost (bps)
M1	55	0.1	80	0.1
M2	235	6.9	245	4.2
B1	445	3.9	460	6.3
B2[1]	1,300	8.5	1,175	15.8
		19.3		**26.4**

Methodology for calculating market-implied credit costs

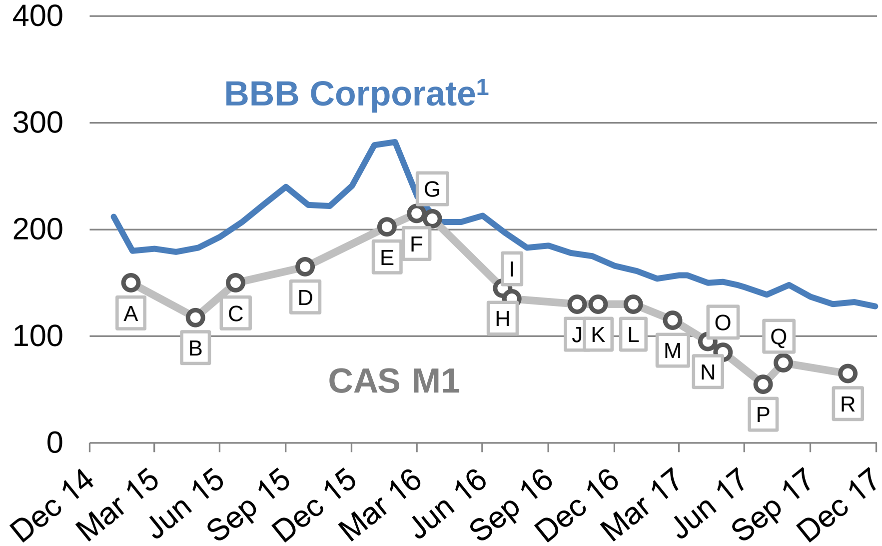
A simplified scenario of 10 percent constant prepayment rate, 0.2 percent constant default rate, and 25 percent loss given default or loss severity are applied to calculate the weighted average life. The calculations assume that 100 percent of the notes are sold (no retention by the Enterprises).

[1] For B2 bonds not sold, the spread reflects the indication price reported in the respective prospectus.

Comparison of CRT Market Pricing - Mezzanine Bonds to Corporate BBB Index

Credit spreads on the higher rated CRT mezzanine tranches performed similar to the corporate BBB index from the second quarter of 2016 to the end of 2017, which tightened over that period.

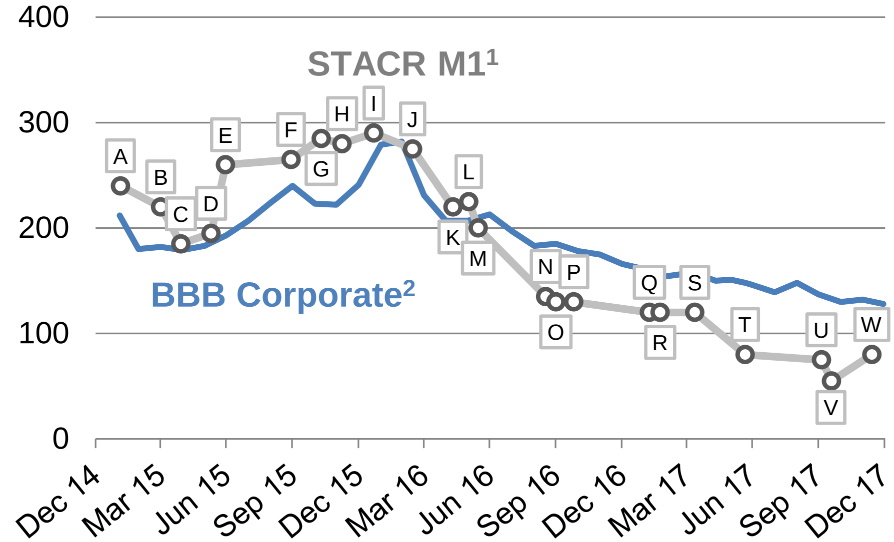
Fannie Mae CAS M1
Credit Spread at Issuance vs BBB Corporate Bond Index (bps)



[1]Bank of America Merrill Lynch US Corporate BBB Index

A - 2015 CO1	G - 2016 C03	M - 2017 C02
B - 2015 CO2	H - 2016 C04	N - 2017 C03
C - 2015 C03	I - 2016 C05	O - 2017 C04
D - 2015 C04	J - 2016 C06	P - 2017 C05
E - 2016 C01	K - 2016 C07	Q - 2017 C06
F - 2016 C02	L - 2017 C01	R - 2017 C07

Freddie Mac STACR M1[1]
Credit Spread at Issuance vs BBB Corporate Bond Index (bps)

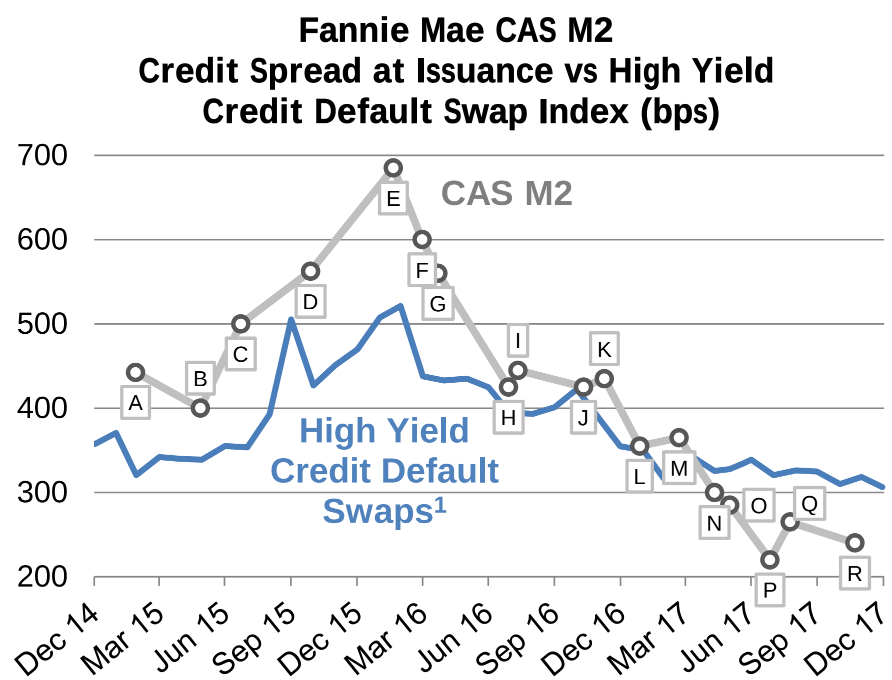


[1]Credit spreads at issuance prior to 2017 are for STACR M2.
[2]Bank of America Merrill Lynch US Corporate BBB Index

A - 2015 DN1	I - 2016 DNA1	Q - 2017 DNA1
B - 2015 HQ1	J - 2016 HQA1	R - 2017 HQA1
C - 2015 DNA1	K - 2016 DNA2	S - 2017 DNA2
D - 2015 HQ2	L - 2016 HQA2	T - 2017 HQA2
E - 2015 DNA2	M - 2016 DNA3	U - 2017 DNA3
F - 2015 HQA1	N - 2016 HQA3	V - 2017 HQA3
G - 2015 DNA3	O - 2016 DNA4	W - 2017 HRP1
H - 2015 HQA2	P - 2017 HQA4	

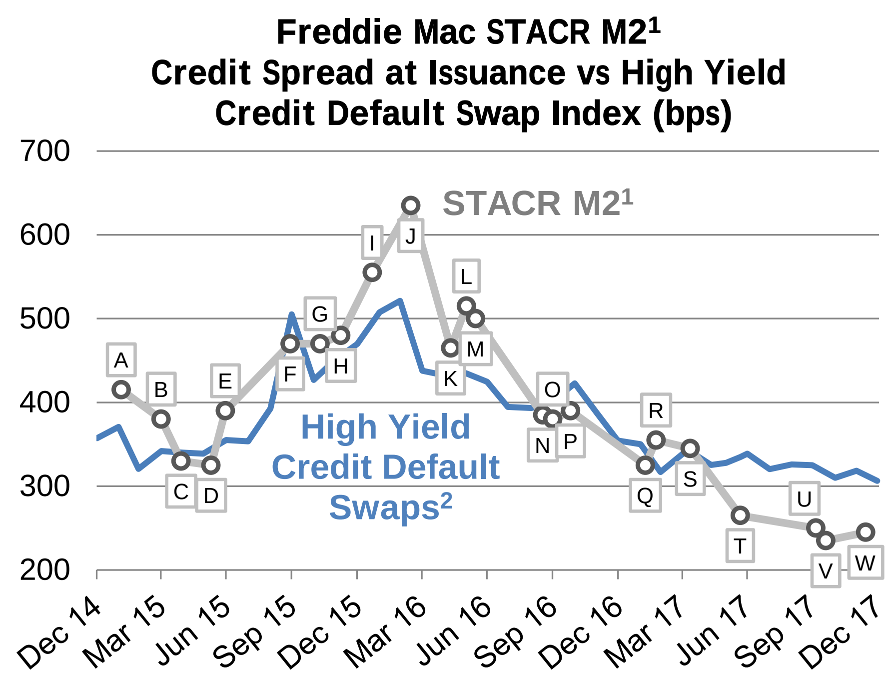
Comparison of CRT Market Pricing - Mezzanine Bonds to High Yield Credit Default Swaps

Credit spreads on the lower rated CRT mezzanine tranches performed similar to the high yield index from the second quarter of 2016 to the end of 2017, which tightened over that period.



[1]Markit CDX North American High Yield Index

A - 2015 CO1	G - 2016 C03	M - 2017 C02
B - 2015 CO2	H - 2016 C04	N - 2017 C03
C - 2015 C03	I - 2016 C05	O - 2017 C04
D - 2015 C04	J - 2016 C06	P - 2017 C05
E - 2016 C01	K - 2016 C07	Q - 2017 C06
F - 2016 C02	L - 2016 C01	R - 2017 C07



[1]Credit spreads at issuance prior to 2017 are for STACR M3.
[2]Markit CDX North American High Yield Index

A - 2015 DN1	I - 2016 DNA1	Q - 2017 DNA1
B - 2015 HQ1	J - 2016 HQA1	R - 2017 HQA1
C - 2015 DNA1	K - 2016 DNA2	S - 2017 DNA2
D - 2015 HQ2	L - 2016 HQA2	T - 2017 HQA2
E - 2015 DNA2	M - 2016 DNA3	U - 2017 DNA3
F - 2015 HQA1	N - 2016 HQA3	V - 2017 HQA3
G - 2015 DNA3	O - 2016 DNA4	W - 2017 HRP1
H - 2015 HQA2	P - 2017 HQA4	

Appendix A: CRT Background

Enterprise Efforts to Transfer Credit Risk to the Private Sector

The Enterprises' public purposes include providing broad national secondary market liquidity for residential mortgage financing, both for single-family and multifamily mortgages. The Enterprises provide market liquidity by acquiring mortgage loans from lenders and creating securities backed by those mortgages for sale to investors. Through the securitization process, the Enterprises transfer the interest rate and liquidity risk associated with holding mortgage loans. The securitization process generally does not, however, transfer credit risk on these loans.[1]

Each Enterprise manages the credit risk of its mortgage acquisitions and guarantees the timely payment of principal and interest to mortgage-backed securities investors. The Enterprises charge a guarantee fee in exchange for providing this guarantee, which covers administrative costs, projected credit losses from borrower defaults over the life of the loans, and the cost of holding capital to protect against projected credit losses that could occur during stressful macroeconomic conditions.[2] The following sections describe the Enterprises' activities to share credit risk through credit risk transfer programs.

The Role of Primary Mortgage Insurance in Sharing Credit Risk

Under their charters, loans acquired by Fannie Mae and Freddie Mac that have LTV ratios above 80 percent are required to have loan-level credit enhancement either in the form of mortgage insurance, a repurchase agreement, or seller retained participation in the loan. This is a long-standing statutory requirement that pre-dates the Enterprises' development of additional credit risk transfer programs. Primary mortgage insurance (PMI) is the form of charter-eligible credit enhancement used most often. Primary mortgage insurance, which can be paid by the borrower, the lender, or the Enterprise, is obtained at the front-end of the mortgage transaction prior to acquisition by the Enterprises.

The Enterprises establish PMI coverage requirements that specify the insurance coverage needed on individual loans, and these coverage requirements vary depending on the type of loan and the LTV of the loan. Currently, for 30-year loans the typical standard level of coverage is roughly twice what is required to meet the Enterprises' minimum guidelines. The dollar amount of insurance coverage is referred to as risk-in-force (RIF). The RIF for each insured loan is calculated by multiplying the percentage of insurance coverage times the UPB of the mortgage. The total RIF for all PMIs represents the maximum level of coverage for all loans with mortgage insurance and is roughly equivalent to the Enterprises' total risk exposure to PMI counterparties.

While the total RIF associated with PMI is large, the actual level of credit risk sharing provided through insurance claims paid depends on the number of insured loans that default and the severity of losses on those loans. The loan-level coverage structure of PMI differs from the pool-level coverage that is used in other kinds of credit risk sharing transactions. The difference between the loan-level coverage of PMI and the pool-level coverage of recent credit risk transfer transactions means that the RIF figures for these two categories are not strictly comparable.

Enterprise Credit Risk Transfer Programs

The Enterprises have made significant progress over the last five years toward fully integrating a credit risk transfer program into their

[1] Freddie Mac's securitization of its multifamily loans through K-deals does transfer credit risk in addition to interest rate and liquidity risk.

[2] Currently, the guarantee fee also includes a 10 basis point charge as required by Section 401 of the Temporary Payroll Tax Cut Continuation Act of 2011, codified at 12 USC 4547.

business models. They have increased the amount of credit risk transferred year-over-year, and they are now transferring credit risk on most higher risk new acquisitions for which credit risk transfer is economically sensible.

The Enterprises have also worked to develop a portfolio of different transaction structures,[3] which include:

- Credit risk debt issuances
- Insurance/reinsurance transactions
- Senior/subordinate securities
- Lender front-end risk transfer transactions

As with primary mortgage insurance, the amount of credit risk transferred is referred to as RIF for the insurance products. For the Enterprises' debt issuances, Connecticut Avenue Securities (CAS) for Fannie Mae and Structured Agency Credit Risk (STACR) for Freddie Mac, and other products where securities are created, the amount of credit risk transferred is referred to as note size. For purposes of simplifying the discussion, this CRT Progress Report refers to the amount of credit risk transferred on all credit risk transfer transactions as RIF. The following subsections provide information about different credit risk transfer structures.

Credit Risk Transfer Transaction Structures

STACR/CAS Transactions: To date, the STACR and CAS debt issuances have been the dominant transaction structure used under the Enterprises' credit risk transfer programs. STACR and CAS securities are issued as Enterprise debt and do not constitute the sale of mortgage loans. Instead, STACR and CAS are designed to track to the performance of a reference pool of mortgage loans that have been previously securitized into MBS guaranteed by the Enterprises and for which the Enterprises have assumed the credit risk.

The STACR/CAS structure has several key benefits. The liquidity of the to-be-announced (TBA) market is not affected by this structure because the loans referenced were previously pooled into guaranteed mortgage-backed securities and sold in the TBA market. The STACR and CAS transactions are also effectively fully collateralized by cash that investors pay to purchase the debt securities. This means that the Enterprises essentially have no counterparty or reimbursement risk with this structure. Investors pay for STACR and CAS notes in full at the time of purchase and absorb applicable credit losses through a reduction in principal on the underlying notes.

Beginning in 2015, Freddie Mac started to transfer to investors a portion of the first losses on mortgage reference pools on all of its STACR transactions, and Fannie Mae did so for CAS transactions starting in 2016. Feedback received from market participants and from credit risk transfer transactions confirmed that selling the first 50 basis points of expected credit losses is expensive. Investors know there will be some degree of expected credit losses for any portfolio of mortgages regardless of economic conditions. As a result, investors charge more for providing credit risk protection for expected credit losses. Based on this information, beginning in 2017 the Enterprises moved generally to retaining the first 50 basis points of expected losses in most transactions.

Both Enterprises also changed the structure of their securities starting in 2015 to transfer credit risk based on actual credit loss amounts, rather than based on defined credit losses calculated by a formula as in prior transactions. That change was made possible by the release by both Enterprises of approximately 15 years of historical loan-level data on single-family mortgage credit actual losses.

[3] Additional information about each of the various credit risk transfer products is available in FHFA's report entitled *Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions,* available at http://www.fhfa.gov/AboutUs/Reports/Pages/Overview-of-Fannie-Mae-and-Freddie-Mac-Credit-Risk-Transfer-Transactions-8212015.aspx.

Other Credit Risk Transfer Structures

The Enterprises use other credit risk transfer structures in addition to the STACR/CAS structure. Pursuing a broad portfolio of credit risk transfer transaction structures furthers FHFA's objectives of having the Enterprises diversify their investor base for credit risk transfers and being able to compare execution across different structures and market environments. The Enterprises are currently pursuing the following additional transaction types:

Insurance/Reinsurance Transactions: Insurance or reinsurance transactions are considered part of the credit risk transfer program and separate from the Enterprises' charter requirements applicable to loans with LTVs greater than 80 percent. To date, the Enterprises have focused on two pool-level products — Agency Credit Insurance Structure (ACIS) for Freddie Mac and Credit Insurance Risk Transfer (CIRT) for Fannie Mae. Instead of providing coverage on individual loans as with loan-level primary mortgage insurance, these pool-level policies cover a specified percentage of aggregate credit risk for a pool that includes thousands of loans.

Through the CIRT and ACIS structures, the Enterprises are purchasing insurance primarily from diversified reinsurers. These transactions are partially collateralized and distributed among a variety of highly-rated insurers, reinsurers, and reinsurer affiliates of mortgage insurers, which reduces counterparty, reimbursement, and correlation risk.[4] Freddie Mac and Fannie Mae have different approaches to the reference pools behind their respective reinsurance deals. In the ACIS structure, which generally shares the same reference pool as STACR, Freddie Mac allocates sales between capital markets and reinsurance investors. In contrast, Fannie Mae establishes separate reference pools for CAS and CIRT transactions. Fannie Mae and Freddie Mac disclose pricing for CIRT and ACIS transactions, respectively.

Senior/Subordinate Transactions: In a senior/subordinate securitization, an Enterprise sells a pool of mortgages to a trust which securitizes the cash flows into several tranches of bonds. The subordinated bonds (mezzanine and first-loss) are structured to absorb expected and unexpected credit losses, protecting the senior bond.

The collateral backing senior/subordinate transactions are typically mortgages for which a TBA market does not exist. Examples include:

- Super-conforming mortgage loans, which have balances between the national conforming loan limit and higher limits applicable in high-cost areas;
- Adjustable Rate Mortgages (ARMs); and
- Multifamily mortgages.

Freddie Mac's version of the senior/subordinate program for its single-family program, called Whole Loan Securities (WLS), is modeled after the multifamily K-deal transactions. Beginning in 2017, Freddie Mac introduced the STACR Securitized Participation Interests (STACR SPI), where unguaranteed bonds are issued and senior cash flow is in the form of Freddie Mac PCs. Fannie Mae has previously executed a version of the senior/subordinate program for its single-family program called Wisconsin Avenue Securities (WAS) and may do so again in the future.

[4] Reinsurers are often characterized by diversified lines of business, which helps mitigate the risk that the Enterprises' counterparties are correlated to the housing market stress and would have increased claims at the same time the Enterprise themselves are under stress.

Front-End Credit Risk Transfer Transactions: Front-end risk transfer transactions are structured so that risk is transferred prior to, or simultaneous with, Enterprise loan acquisition. To date, the Enterprises have executed front-end transactions with lenders, insurance companies, and reinsurance companies. Lender front-end risk sharing has been the primary form of front-end risk transfer. Lender front-end risk sharing may be structured through the issuance of securities, which allows the originating lender to either hold the credit risk by retaining the securities or sell the credit risk by selling the securities to credit risk investors. Alternatively, lender front-end risk sharing may be executed without any securities issuance, whereby a lender retains all the credit risk transferred by the Enterprise but generally fully collateralizes its obligation. Fannie Mae's structured security version of front-end risk transfer with lenders is called L Street Securities (LSS). Both Enterprises are making progress on efforts to expand the front-end risk transfer approach to the private mortgage insurance and reinsurance industries. Each issued a front-end structure with reinsurer affiliates of the mortgage insurance industry in 2016 and 2017, and Fannie Mae issued a larger 12-month forward structure with traditional reinsurers in the first quarter of 2017.

Compensation paid to the lenders for the protection they provide on front-end transactions is based solely on economic considerations, not on the overall amount of loans the lenders sell to the Enterprises. For all front-end transactions, lenders are required to retain a material portion of the risk on the underlying loans and to collateralize their retained loss position. Insurers or reinsurers that write front-end coverage for the Enterprises must partially collateralize their obligations.

Multifamily Credit Risk Transfer Transactions: Risk sharing with the private sector is an integral part of the multifamily business models of both Enterprises. Freddie Mac issues senior/subordinate notes to finance most of its multifamily originations, primarily through its K-deal structure. In these transactions, virtually all credit risk is transferred to investors through subordinated bonds that are structured to absorb expected and unexpected risk.

Freddie Mac also launched a new structured product (SCR notes) to transfer credit risk on certain multifamily mortgage loans backing targeted affordable rental housing tax-exempt bonds guaranteed by Freddie Mac.

In Fannie Mae's multifamily program (known as DUS), lenders typically share in loan level credit losses in two ways: (1) lenders share up to one-third of the losses on a pro rata basis, or (2) lenders bear losses up to the first 5 percent of the unpaid principal balance of the loan and share in remaining losses up to a prescribed limit. In addition to DUS transactions, Fannie Mae also completed multifamily CRT transactions in 2016 and 2017. In these transactions, Fannie Mae transferred a portion of the risk to the reinsurance industry.

Appendix B: CRT Principles, Concepts and Definitions

CRT Principles

FHFA assesses all Enterprise credit risk transfer activities using the same key principles. These principles include:

Reduce taxpayer risk: Transactions should transfer a meaningful amount of credit risk to private investors.

Economically sensible: The program should consist of transactions in which the cost to the Enterprise for transferring the credit risk does not meaningfully exceed the cost to the Enterprise of self-insuring the credit risk being transferred.

Continuity of core business: Transactions should not interfere with the continued operation of the Enterprises' core business, including the efficient operation of the to-be-announced (TBA) market or the ability of borrowers to access credit.

Repeatable: Whenever possible, transactions should be part of a regular program of similar transactions.

Scalable: Transaction structures should be capable of being scaled without significantly affecting the economics or management of the transaction.

Counterparty strength: In transactions in which the credit risk being transferred is not fully collateralized, credit risk transfer counterparties to the Enterprises should be financially strong companies that are able to fulfill their financial commitments even in adverse markets.

Broad investor base: The program should include different transaction structures to attract a diversified and broad investor base with the objective of improving pricing, increasing secondary market liquidity, and promoting market stability.

Stability through economic and housing cycles: Transaction structures should be designed to ensure that at least some investors will remain in the market through all phases of the housing price cycle, including economic downturns.

Transparency: Parties to a transaction should provide public disclosure of transaction information, whenever practical.

Level playing field: Credit risk transfer transactions should only reflect the cost of transferring credit risk and should not favor large mortgage originators over small ones.

CRT Concepts and Definitions

First Loss Position: Credit risk for a pool of mortgages can be decomposed into expected loss (under baseline economic conditions), unexpected loss (under stressful, yet plausible, economic conditions), and catastrophic loss (beyond unexpected losses). While there is no single definition of first loss for purposes of credit risk transfers, FHFA interprets "first-loss position" as starting with the first dollar of loss through all expected losses.

Expected Credit Loss: Credit loss projected, on average, to occur if housing market conditions proceed according to a stable long-term trend, particularly with regard to house price levels. Even in a healthy housing market, a pool of mortgages is likely to experience some credit losses (i.e., defaults on the underlying mortgages) as some borrowers face trigger events such as illness, job loss, or other unanticipated events.

Unexpected Credit Loss: Credit loss over and above expected losses should there be a stressful, yet plausible, macroeconomic event, such as a severe downturn in house price levels as might accompany a recession (similar to what was experienced during the recent housing crisis), but short of catastrophic credit losses.

Catastrophic Credit Loss: Credit loss beyond unexpected loss that would be deemed highly unlikely to occur. There is no bright line between unexpected credit losses and catastrophic credit losses.

Credit Risk: In the case of residential mortgage loans, credit risk is risk of loss to a mortgage creditor stemming from a borrower's failure to repay the loan.

Credit Risk Transfer: Credit risk transfer occurs when a party exposed to credit risk transfers some or all of that risk to another party, usually accompanied by the payment of a fee for the other party's assumption of that risk. The Enterprises' credit risk transfer transactions are effective for a limited duration, typically a 10- to 12-year time period. The exact reimbursement terms and recognition of credit loss are a function of the specific credit risk transfer contract for that transaction. Risk transfer may result in the transferor's assumption of a different risk. For example, when an Enterprise transfers the credit risk on a mortgage loan for which the Enterprise has guaranteed payment of principal and interest, the Enterprise may assume risks associated with the counterparty, including reimbursement risk.

Counterparty Risk: Counterparty risk is the risk that a contractual counterparty will not perform in accordance with contract terms. This would include the counterparty's capacity to pay claims timely, such as its financial and operational strength, the depth and quality of its capital, and the diversification of its business. It also includes assessment of concentration exposures with that counterparty. When an Enterprise transfers the credit risk on a mortgage loan for which the Enterprise has guaranteed payment of principal and interest, the Enterprise assumes reimbursement risk from its risk transfer counterparties for losses incurred.

Reimbursement Risk: Reimbursement risk is the risk that the party(ies) to the credit risk transfer (front- or back-end) will not repay the Enterprise on time and in full for its portion of credit losses. When an Enterprise transfers credit risk while continuing to provide a guarantee to MBS investors for timely payments on principal and interest, the Enterprise assumes reimbursement risk from its risk transfer counterparty. This is an element of counterparty risk.

Front-End or Up-Front Credit Risk Transfer: This term applies to transactions in which the arrangement of the risk transfer occurs prior to, or simultaneous with, the acquisition of residential mortgage loans by an Enterprise. "Front-end" refers to the timing of the arrangement of the credit risk transfer and does not affect (either mitigate or exacerbate) the reimbursement risk assumed by an Enterprise.

Back-End Credit Risk Transfer: This term applies to transactions in which the arrangement of the risk transfer occurs after the acquisition of residential mortgage loans by the Enterprises. "Back-end" refers to the timing of the arrangement of the credit risk transfer and does not affect (either mitigate or exacerbate) the reimbursement risk assumed by an Enterprise.