



# OVERVIEW OF FANNIE MAE AND FREDDIE MAC CREDIT RISK TRANSFER TRANSACTIONS

AUGUST 2015



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

## INTRODUCTION

In 2012, the Federal Housing Finance Agency (FHFA) initiated a strategic plan to develop a program of credit risk transfer intended to reduce Fannie Mae's and Freddie Mac's (the Enterprises') overall risk and, therefore, the risk they pose to taxpayers. In just three years, the Enterprises have made significant progress in developing a market for credit risk transfer securities, evidenced by the fact that they have already transferred significant credit risk on loans with over \$667 billion of unpaid principal balance (UPB).

Credit risk transfer is now a regular part of the Enterprises' business. The Enterprises are currently transferring a significant amount of the credit risk on almost 90% of the loans that account for the vast majority of their underlying credit risk. These loans constitute about half of all Enterprise loan acquisitions. Going forward, FHFA will continue to encourage the Enterprises to engage in large volumes of meaningful credit risk transfer through specific goals in the annual conservatorship scorecard and by working closely with Enterprise staff to develop and evaluate credit risk transfer structures.

## BACKGROUND

The Enterprises buy single-family mortgages from mortgage companies, commercial banks, credit unions, and other financial institutions. In most cases, a lender receives mortgage-backed securities (MBS) in exchange for mortgage loans. Each Enterprise guarantees the timely payment of principal and interest on its MBS and charges a guarantee fee for providing that guarantee. The guarantee fee covers projected credit losses from borrower defaults over the life of the loans, administrative costs, and a cost for holding the capital required to protect against credit losses anticipated during stressful macroeconomic conditions.<sup>1</sup> A lender typically passes the cost of the guarantee fee on to the borrower through the interest rate on the mortgage.

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<sup>1</sup> Currently, the guarantee fee also includes a 10 basis point charge as required by Section 401 of the Temporary Tax Cut Continuation Act of 2011, codified at 12 USC 4547.



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Any mortgage encompasses both credit risk and interest rate risk. Interest rate risk is transferred to investors through the sale of the MBS. The Enterprises manage the credit risk through a number of mechanisms. First, for any mortgage loans with an outstanding principal balance exceeding 80 percent of the value of the property, the Enterprises' charter acts require an acceptable form of credit enhancement. The credit enhancement requirement can be satisfied through any of three acceptable forms outlined in the charters, of which primary mortgage insurance (MI) is by far the most used. Primary MI typically covers credit losses down to a loan-to-value (LTV) level of 62 to 75 percent, where the depth of required coverage increases with the LTV at origination.<sup>2</sup> The combination of borrower equity and mortgage insurance should be sufficient to cover credit losses amounting to at least 20 percent of the value of the property at the time of loan acquisition. Second, as mentioned above, the Enterprises collect a guarantee fee, a portion of which is intended to cover potential credit losses beyond the credit enhancement provided by borrower equity and mortgage insurance.

Mortgage credit risk or losses, after accounting for any credit enhancements, can be segmented into: 1) expected loss; 2) unexpected loss; and 3) catastrophic loss. Expected loss, or "baseline loss," is credit loss projected 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 defaults as certain borrowers face trigger events such as illness, job loss, or divorce. Unexpected loss is the loss to the Enterprise 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). Catastrophic losses are those beyond unexpected loss and would be deemed highly unlikely to ever occur, allowing that there is not a bright line marking transition from unexpected to catastrophic loss.

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<sup>2</sup> Any of the credit enhancements allowable under the Enterprises' charters, including Primary MI, are a means to transfer risk from the Enterprises to third parties. As discussed in this paper, however, we refer to "risk transfer" transactions as those above and beyond the pre-2013 established means of risk transfer intended to meet charter compliance.



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Credit risk transfer transactions can be viewed as the Enterprise paying a portion of the guarantee fee as a cost of transferring some of the credit risk to private sector investors. To date, credit risk transfers have been focused on transferring expected and unexpected credit risk. This segment of credit risk historically has been the full responsibility of the Enterprise and covered by the guarantee fee. At present, given the current macroeconomic conditions and risk profile of loan acquisitions, this amounts to the Enterprise obtaining the equivalent of insurance to cover its potential credit losses (after taking into account credit enhancements such as MI) up to about the first three to six percent of the outstanding balance on the pool of mortgage loans covered by the credit risk transfer.

### CREDIT RISK TRANSFER UNDER FHFA CONSERVATORSHIP

During conservatorship, FHFA has established a goal of reducing the risk exposure to taxpayers presented by the credit guarantees extended by the Enterprises. To accomplish this, FHFA is using its conservatorship strategic plans and scorecards to encourage the Enterprises to transfer credit risk to the private sector. FHFA's 2012 *A Strategic Plan for Enterprise Conservatorships* proposed the use of "loss sharing agreements" to reduce the credit risk incurred by the Enterprises. The 2013 Conservatorship Scorecard required each Enterprise to "demonstrate the viability of multiple types of credit risk transfer transactions" on single-family loans. *The 2014 Strategic Plan for the Conservatorships of Fannie Mae and Freddie Mac* emphasized the desirability of greater use of credit risk transfer in the future. Additionally, the 2014 and 2015 Conservatorship Scorecards set more ambitious credit risk transfer performance goals for each Enterprise.



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

The various credit risk transfer products used by the Enterprises have all been developed in keeping with certain program goals agreed to by FHFA and the Enterprises in 2012. The goals include that credit risk transfer transactions should be economically sensible, repeatable, scalable, and structured to not disrupt the efficient operation of the “To Be Announced” (TBA) market (which provides the market with benefits including allowing borrowers to lock in rates in advance of closing).<sup>3</sup> A further goal was to develop different types of products to provide for the broadest possible access to investors with the expectation that at least some of those investors would remain in the market through all phases of a housing price cycle.

The types of transactions already implemented include structured debt issuances known as Structured Agency Credit Risk (STACR) for Freddie Mac and Connecticut Avenue Securities (CAS) for Fannie Mae, insurance/reinsurance transactions, front-end lender risk sharing transactions, and a senior subordinate security. At least one other type of transaction that may be forthcoming is a credit-linked note version of STACR and CAS.

Early versions of credit risk transfer products were designed to transfer large portions of unexpected loss. As the products and markets have evolved, portions of expected and catastrophic losses are now also being transferred with some products. Nonetheless, catastrophic risk events are deemed so unlikely, meaning they present so little risk, that the Enterprises have found it to be too costly (not economical) to transfer much of this risk to the private sector.

The Enterprises and private investors who assume credit risk typically use credit models to assess and quantify the credit risk inherent in a pool of mortgage loans. The credit models estimate potential losses as they relate to borrower and loan type characteristics (such as credit score, LTV ratio, loan product type) in combination with macroeconomic scenarios that encompass stressed house price and interest rate paths. Because there are different perspectives among analysts on what is the best practice for credit model structure and the degree of stress that is plausible to incorporate in macroeconomic scenarios, there is no single view on the extent of credit loss embedded in any given pool of mortgages. However, there is a general consensus on the range of potential credit losses for a given pool of mortgages. Therefore, the market pricing of credit risk transfer transactions serves to indicate the perspective of the many and varied types of investors.

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<sup>3</sup> Single-class MBS issued by the Enterprises are typically traded in the TBA market, which is a forward exchange market that allows investors to purchase that type of MBS before knowing the exact composition of the underlying mortgage pools. The widespread use of TBA trading has contributed significantly to the liquidity and efficiency of the secondary market for single-class MBS.



## THE AMOUNT OF CREDIT RISK BEING TRANSFERRED

There are three measures to jointly consider in assessing the amount of credit risk being transferred. A first measure is the proportion of loans on which at least some risk is transferred. A second measure is the percent of UPB of those loans that is covered by the credit risk transfer, which is typically in the first three to six percent range. The third measure is the amount of risk transferred measured as a percent of the total estimated amount of credit risk (at least up to catastrophic risk) for a group of loans. For example, transferring credit risk on 100 percent of loans in a pool, but where the risk transferred is only the first one percent of UPB, while the expected and unexpected credit risk (short of catastrophic risk) in the pool is closer to four percent of UPB, would amount to transferring only one-quarter of the effective risk in the pool and therefore would not be viewed as constituting meaningful credit risk transfer. FHFA publicly announces program goals under the first measure but in fact monitors all three measures in assessing the progress and effectiveness of the credit risk transfer programs.

Table 1 shows that credit risk transfer amounts have been increasing, in terms of UPB, for each Enterprise since the start of credit risk transfer programs in 2013 and the corresponding annual scorecard goals. Through 2014, both Enterprises have succeeded in meeting these goals. Further, both Enterprises are on track to meet their goals for 2015. STACR/CAS issuances have been the dominant form of credit risk transfer to date, but amounts transferred through insurance/reinsurance and other programs are growing.

# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

**Table 1. Credit Risk Transfer Statistics**

Enterprise Single-Family Credit Risk Transfer Transactions						
Unpaid Principal Balance of Mortgages with Risk Transferred (in Billions of Dollars)						
Year	Enterprise	All Transaction Types	Enterprise Debt Issuance	Reinsurance and Other Transactions	Scorecard Goal	Actual vs. Scorecard Goal
2013	Fannie Mae	\$31.2	\$25.0	\$6.2	\$30.0	104%
	Freddie Mac	\$44.8	\$41.9	\$2.9	\$30.0	149%
	Both Enterprises	\$75.9	\$66.9	\$9.1		
2014	Fannie Mae	\$218.8	\$209.6	\$9.2	\$90.0	243%
	Freddie Mac	\$126.1	\$105.6	\$20.5	\$90.0	140%
	Both Enterprises	\$344.8	\$315.2	\$29.7		
2015 YTD	Fannie Mae	\$144.8	\$136.3	\$8.5	\$150.0	97%
	Freddie Mac	\$101.9	\$88.1	\$13.8	\$120.0	85%
	Both Enterprises	\$246.7	\$224.5	\$22.3		
Total 2013-2015 YTD	Fannie Mae	\$394.7	\$370.9	\$23.9		
	Freddie Mac	\$272.7	\$235.6	\$37.2		
	Both Enterprises	\$667.5	\$606.5	\$61.0		

Source: FHFA

Data as of July 14, 2015

In order to put these program growth numbers into context, Table 2 shows an average for both Enterprises of single-family acquisitions by loan type and the proportions of those loans that have been covered by credit risk transfer transactions. For the largest category of loan acquisitions, which contain most of the new acquisition credit risk (non-Home Affordable Refinance Program (HARP), fixed-rate 30-year loans with LTVs above 60%), both Enterprises are now transferring risk on about 90 percent of UPB. Among those loan types not targeted for credit risk transfer are HARP loans, which are declining in volume such that a credit risk transfer program is not sustainable or viable. Additionally, recent acquisitions of 15- and 20-year fixed-rate loans, and 30-year fixed-rate loans with LTV ratios below 60 percent, contain minimal credit risk such that a credit risk transfer program for these loans would not be economical. For other types of loans, such as adjustable rate mortgages (ARMs), credit risk transfer may be viable but only with a specialized product, which in some cases is under development.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

**Table 2: Coverage of Credit Risk Transfers**

<b>Estimated Enterprise Loan Acquisitions and Level of Credit Risk Transfer Coverage</b> (all numbers represent the proportion of totals at acquisition)						
	<b>2013</b>				<b>2014</b>	
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>
<b>TOTALS AT ACQUISITION (normalized to 100)</b>	100	100	100	100	100	100
<b>LOANS AT ACQUISITION: Targeted for Credit Risk Transfer</b>	37	39	46	52	51	57
Loans ultimately covered by Credit Risk Transfer	31	37	43	45	44	49
<b>LOANS AT ACQUISITION: Not currently targeted for Credit Risk Transfer</b>	63	61	54	48	49	43
HARP / Relief Refinance	25	25	21	19	19	13
Not 30-Year Fixed (Non HARP/Non Relief Refi, 15/20yr+ARM)	25	24	23	20	22	22
15/20-Year Fixed	20	19	17	15	15	15
ARMs	2	3	4	3	5	6
LTV less than 60 (30 Year Fixed)	11	10	8	8	7	7
Other Exclusions	1	1	1	1	1	1
<b>Credit Risk Transfer Loan Coverage</b> (numbers show Credit Risk Transfer coverage for all acquisitions, and for eligible 30-year Fixed)						
Percentage of acquisitions covered by Credit Risk Transfer	31	37	43	45	44	49
Percentage of targeted acquisitions covered by Credit Risk Transfer	85	96	93	88	87	86
<sup>a</sup> Percentages are computed before the 5% risk retention requirement. A small percentage of loans either become delinquent or prepay after acquisition and before deal time, such that the percentage cannot get to 100%.						



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Tables 3a and 3b show for the STACR and CAS products the second measure of credit risk transferred or the percentage of UPB that is covered by the credit risk transfer. That percentage is defined as the difference between the attach and detach points (expressed in basis points in the tables). For example, if the attach point is one percent (100 basis points), the Enterprise is responsible for credit losses up to one percent of the UPB of the loan pool. If the detach point is three percent, the Enterprise is responsible for credit losses above three percent of the UPB of the loan pool. Credit losses between the attach point of one percent and the detach point of three percent are the responsibility of the investors in the credit risk transfer product. By multiplying the difference in the attach and detach (basis) points expressed as percentage (.027 in the first row of Table 3a) by the corresponding UPB of the reference pool on which credit risk is transferred (\$25 billion), we arrive at the note size sold to investors (\$675 million).<sup>4</sup> The credit risk between attach and detach points is what is being transferred. Note that recent STACR deals attach at zero percent, or the first dollar of loss, meaning Freddie Mac is transferring a portion of the expected loss with this structure. Although not shown, other types of credit risk transfers also have transferred portions of expected loss.

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<sup>4</sup> This simple formula will result in overstating note size in those instances where an entire amount of every tranche is not sold to investors. Thus far, this has occurred only for those Freddie Mac transactions where the attach point is zero. In these transactions, Freddie Mac retained about half of the B tranche.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

**Table 3a: Fannie Mae CAS Transactions**

Deal	Date	UPB* (in millions of \$)	Risk transfer attach/detach points (in basis points)	Note size (in millions of \$)
2013-1	10/24/13	25,000	30, 300	675
2014-1	1/27/14	27,778	30, 300	750
2014-2 (1)	5/26/14	44,446	30, 300	1,200
2014-2 (2)	5/26/14	12,904	65, 375	400
2014-3(1)	7/25/14	55,556	30, 300	1,500
2014-3(2)	7/25/14	17,742	65, 375	550
2014-4(1)	11/25/14	34,037	30, 300	919
2014-4(2)	11/25/14	17,097	65, 375	530
2015-1(1)	2/26/15	29,806	40, 350	924
2015-1(2)	2/26/15	17,852	70, 375	545
2015-2(1)	5/19/15	26,600	40, 375	891
2015-2(2)	5/19/15	16,157	80, 425	557
2015-3(1)	7/22/15	26,840	40, 375	899
2015-3(2)	7/22/15	19,070	80, 425	658
<b>Total CAS Transactions</b>		<b>370,885</b>		<b>10,998</b>
<b>Total Reinsurance and Other Transactions</b>		<b>23,900</b>		<b>600</b>
*UPB reflects the amount of the reference pool on which risk is actually transferred.				



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

**Table 3b: Freddie Mac STACR Transactions**

Deal	Date	UPB* (in millions of \$)	Risk transfer attach/detach points (in basis points)	Note size (in millions of \$)
2013-DN1	7/26/13	18,519	30, 300	500
2013-DN2	11/12/13	23,333	30, 300	630
2014-DN1	2/12/14	24,000	30, 450	1,008
2014-DN2	4/9/14	23,000	30, 450	966
2014-DN3	8/11/14	16,000	40, 460	672
2014-HQ1	8/11/14	8,000	75, 650	460
2014-HQ2	9/15/14	14,000	60, 610	770
2014-DN4	10/28/14	13,000	50, 520	611
2014-HQ3	10/28/14	7,600	85, 650	429
2015-DN1	2/3/15	21,679	0, 450	880
2015-HQ1	3/31/15	14,208	0, 650	860
2015-DNA1	4/28/15	26,218	0, 425	1,010
2015-HQ2	6/9/15	7,600	0, 560	426
2015-DNA2	6/29/15	18,421	0, 550	950
<b>Total STACR Transactions</b>		<b>235,577</b>		<b>10,172</b>
<b>Total Reinsurance and Other Transactions</b>		<b>37,200</b>		<b>1,500</b>
*UPB reflects the amount of the reference pool on which risk is actually transferred.				

Source: FHFA

The third measure of credit risk transfer, the estimated amount of credit risk inherent in a loan pool, is not directly observable at the time of credit risk transfer and can only be assessed for a given pool of loans by using a credit model. The credit model should account for the fact that the amount of credit risk in the pool will vary according to the credit risk characteristics of the loans in the pool (e.g. credit score and LTV), the quality of underwriting at the time, and, importantly, the state of the housing market (whether or not there is a price bubble in play) at the time the loans are acquired. This third measure is often translated into a measure of capital that should be sufficient to cover unexpected losses. The credit risk transfers are a means to reduce that amount of required capital. Thus, measuring the extent of capital reduction achieved is an important metric in assessing the effectiveness of the credit risk transfer program.



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Both Enterprises have released extensive historical loan-level data, including loan characteristic and performance data. We can observe actual loss rates realized by, for example, acquisition-year cohorts of loans over the last 15 years (after accounting for all credit enhancements) in order to gain some perspective on how model-driven measures of credit risk might vary over time. As shown in Table 4, actual loss rates derived from Freddie Mac's historical data set have varied from near zero to about 3.5 percent, peaking for the cohorts 2006 and 2007.<sup>5</sup> Variations in credit risk characteristics, underwriting standards, and the macroeconomic environment all contributed to the actual variation in loss rates over the recent house price cycle.

Further, Table 4 shows how the actual loss rates relate to the recent STACR and CAS detach points for the reference pools defined by LTV groupings of 60-80 percent and 80-95 percent. We note that STACR detach points all exceed the historical maximum loss rates for the corresponding LTV levels, and CAS detach points also would exceed these historical loss rates if we adjusted the historical loan data to include only loans with comparable loan-level risk characteristics (such as LTV and credit score) to the CAS-eligible loans on which risk is being transferred.

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<sup>5</sup> Loss rates for the years 2010 and beyond are very low because the loans are still very early in their average life and because of significantly improved underwriting and upward movement in house prices in recent years.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

**Table 4. Freddie Historical Loss Data**

Freddie Mac Historical Loss Data: Percentage of Actual Losses and How Much is Left by Vintage (All figures shown as percentages of UPB at origination)					
<i>LTV Category:</i>	Actual Loss Rates				UPB Remaining
	All Loans	(0-60)	(60-80)	(80-95)	All Loans
1999	0.13	0.02	0.14	0.16	1.52
2000	0.18	0.02	0.16	0.25	0.75
2001	0.23	0.02	0.20	0.42	1.94
2002	0.34	0.04	0.31	0.67	4.12
2003	0.42	0.05	0.41	0.93	10.46
2004	0.92	0.13	0.96	1.45	12.80
2005	2.27	0.40	2.56	3.35	16.82
2006	3.34	0.62	3.86	4.06	15.30
2007	3.47	0.66	3.73	4.84	18.64
2008	1.56	0.21	1.79	2.23	16.17
2009	0.14	0.01	0.19	0.15	28.47
2010	0.03	0.00	0.04	0.03	42.27
2011	0.01	0.00	0.01	0.01	51.97
2012	0.00	0.00	0.00	0.01	84.74
2013	0.00	0.00	0.00	0.00	88.40

**Note:** Actual losses are calculated on a sample of historical Freddie Mac loans. Loans with losses have been assigned a zero balance code and identified as either a "foreclosure alternative group" or a "Real Estate Owned disposition," and we exclude repurchases. The actual loss value is calculated as the current unpaid principal balance less recoveries and lost interest payments (based on the months delinquent). The loss rates in the table may understate final realized loss rates because we do not include projections of losses that may occur beyond mid-2015. The values are approximate and do not necessarily reflect what might be reported elsewhere or in financial disclosures.

## INVESTOR PARTICIPATION

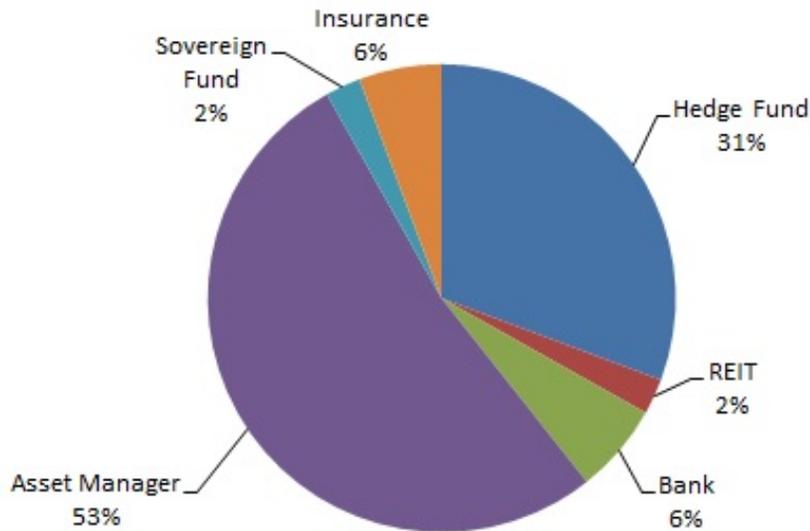
Since 2013, the Enterprises have transferred credit risk to a wide variety of institutional investors, including asset managers, hedge funds, insurance and reinsurance companies, banks, sovereign funds, real estate investment trusts (REITs), and lenders. There are many factors that affect whether an investor chooses to participate in a particular type of credit risk transfer transaction. These factors include tax law interpretations, investor capital requirements, and investors' preferences or constraints with regard to the product structure.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

More than 150 investors have participated in the STACR and CAS programs to date, with 50-70 investors typically participating by purchase in any given transaction. Figure 1 below shows the shares of STACR and CAS securities purchased by different types of investors.

**Figure 1. Types of Investors in STACR/CAS Debt Issuance Transactions**



Source: FHFA

## TYPES OF CREDIT RISK TRANSFER

The following sections briefly describe the different credit risk transfer structures that the Enterprises have used or are considering using. The diagrams illustrate generic, hypothetical transactions. The amounts, percentages, and other data shown are illustrative and do not reflect the terms of any specific transaction. Most of the transactions have been structured to provide credit risk transfer for 10 years, which is longer than the typical average life of a pool of mortgages.

### ENTERPRISE DEBT ISSUANCE (STACR/CAS)

The STACR and CAS securities account for about 90 percent of credit risk transfers to date. These securities are issued as Enterprise debt and do not constitute the sale of mortgage loans or their cash flows. Instead, STACR and CAS are considered to be synthetic notes or derivatives because their cash flows track to the credit risk performance of a notional reference pool of mortgage loans. The TBA market is not affected by these structures because the underlying loans are pooled into guaranteed MBS, which are sold to interest rate investors. In the STACR and CAS structure, the Enterprises receive the proceeds of the note issuance at the time of sale to investors. The Enterprises pay interest to investors on a monthly basis and allocate principal to investors based on the repayment and credit performance of the loans in the underlying reference pool. Investors ultimately receive a return of their principal, less any covered credit losses. In this design, the Enterprises bear no counterparty credit risk.

The amount of loss passed on to investors can be structured in the security to be based on either a “calculated loss” schedule, which assesses a predetermined loss severity that corresponds to a level of accumulated credit events or actual losses from the reference pool. Recently, the Enterprises have begun to shift towards basing all transactions on actual losses.

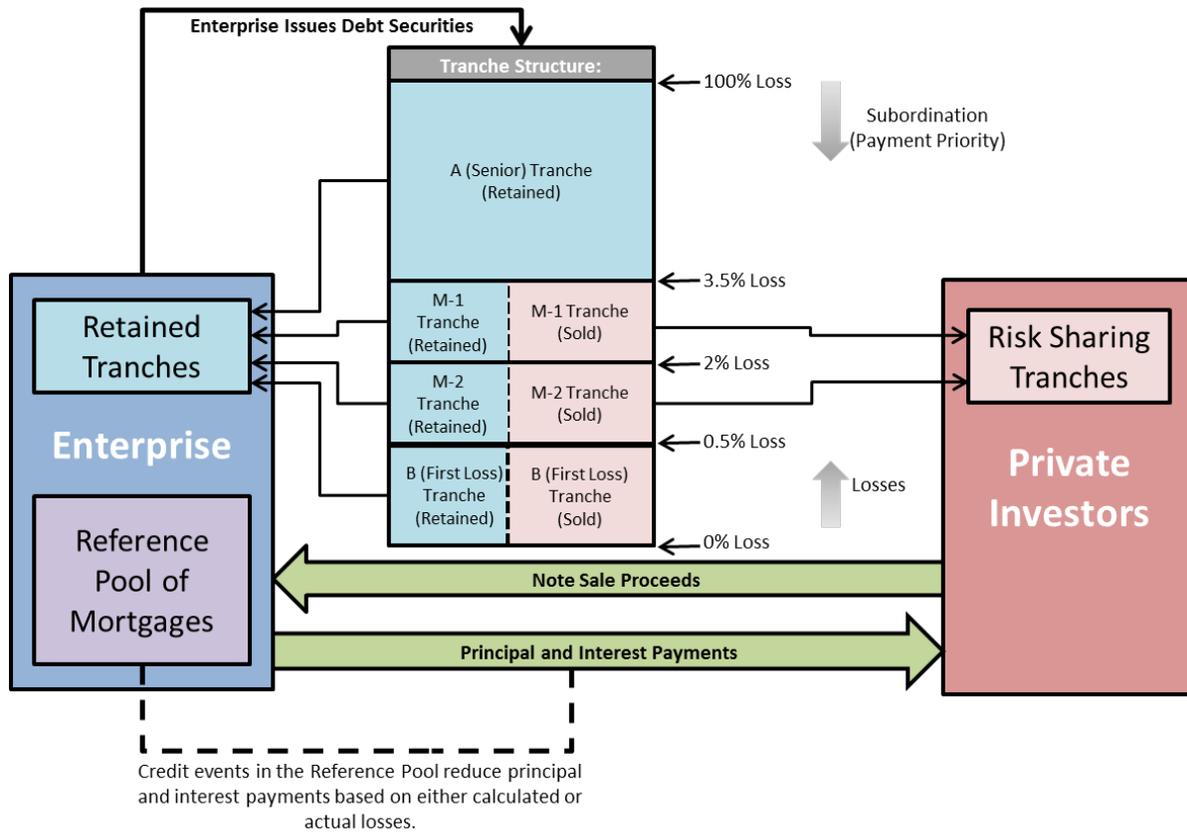
The structure of a hypothetical STACR or CAS transaction is shown in Figure 2 (actual percentage amounts will vary from those depicted in Figure 2). Typically there is a senior tranche (A), at least two mezzanine tranches (M-1 and M-2), and a junior or first-loss tranche (B). Credit losses due to borrower defaults are allocated first to the most junior or subordinate tranche (B) before the next more senior tranche (in this example, M-2) takes a loss. Additionally, this structure is designed so that rapid unscheduled prepayments do not leave less than the expected level of credit risk protection.

To date, the Enterprises have typically retained some or all of the first-loss tranche. Both economic and tax-related issues have been the primary considerations in whether to sell any portion of the first-loss tranche. They also retain all of the senior tranche because it represents most of the catastrophic risk and is not economical to sell. In recent STACR transactions, Freddie Mac has sold off a portion of the first loss tranche (not shown in Figure 2). The portion of the tranches that is sold to investors is the only actual risk transfer. Furthermore, the Enterprises retain a five percent vertical slice of every tranche in order to align the incentive of the Enterprise to manage the credit risk efficiently with the interests of the investors.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Figure 2. Illustrative Enterprise Debt Issuance (STACR/CAS) Structure



Source: FHFA

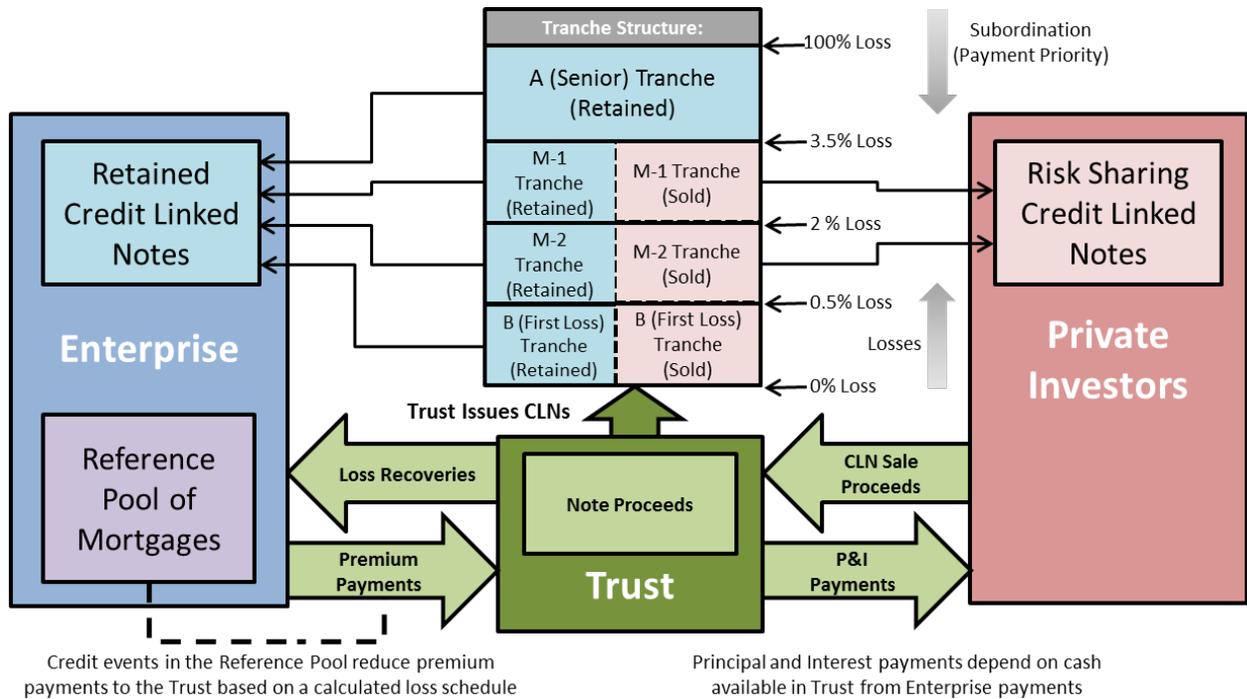
## CREDIT-LINKED NOTES

FHFA's longer term goal for the STACR and CAS products is for the Enterprises to transition from a debt issuance structure to credit-linked notes (CLNs). This structure, shown in Figure 3, is broadly similar to Enterprise debt issuances, except that a trust issues the notes instead of the Enterprise. The trust holds the note sale proceeds and invests them in cash or equivalent short-term assets. The Enterprise, through the trust, pays the investors a premium for credit protection on the pool. When there are losses in the pool, the trust compensates the Enterprise based on either a calculated loss schedule or actual losses. As with the STACR and CAS debt structures, the credit risk of the reference pool remains on the Enterprise's balance sheet since the Enterprise guarantees timely interest and principal payments on the MBS sold to investors.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Figure 3. Illustrative Credit-Linked Notes



Source: FHFA

CLNs have several advantages over Enterprise debt issuances. Interest and principal payments on the STACR and CAS debt issuances are general obligations of the Enterprises, which means the investors take on the counterparty risk that the Enterprises will not meet their obligations. Although the counterparty risk associated with the debt structure while the Enterprises are in conservatorship is mitigated by improved financial results and the ongoing backstop provided by the Department of the Treasury, without the government backstop there would be such a counterparty risk. The CLN structure presents less counterparty risk for investors because the proceeds from the sale of the notes are fully collateralized by the funds held in the trust. In addition, through the use of a CLN structure combined with other deal features, it may be possible for the Enterprises to eliminate an accounting-related timing mismatch between when the Enterprise actually recognizes a loss and when it is able to recover the loss from the risk sharing investor, which could be years later. However, there are CLN-related issues regarding tax treatment that are not yet resolved and could disadvantage CLN securities relative to other types of mortgage investments (such as REMICs).

## INSURANCE/REINSURANCE

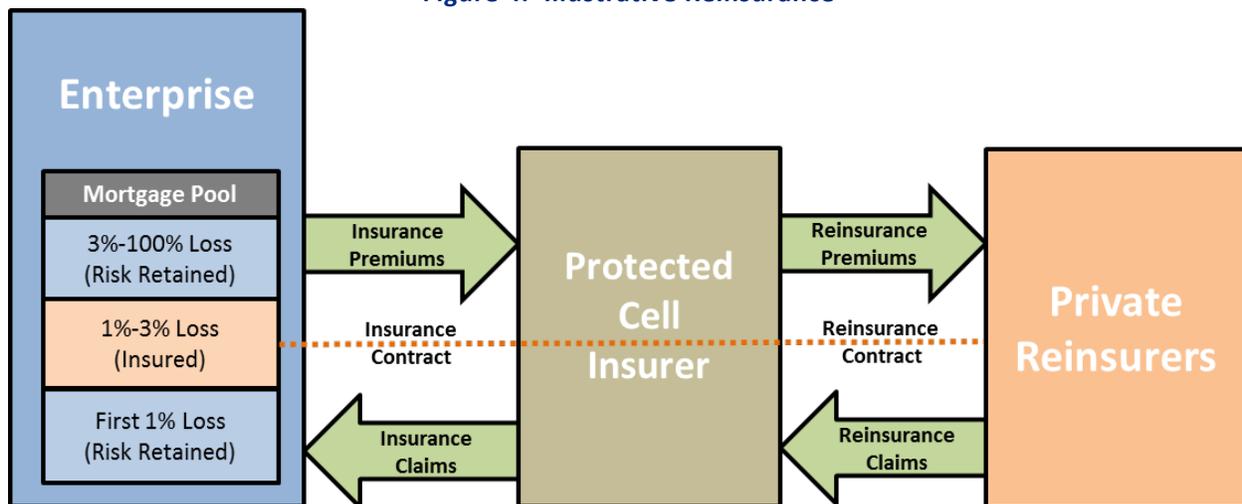
Insurance or reinsurance transactions that are over and above any charter compliant primary MI are considered part of the credit risk-transfer program. To date, the credit risk transfer program has focused solely on pool level insurance transactions. In contrast to loan level insurance structured such as primary MI, pool level insurance covers an entire pool of hundreds or thousands of loans and is purchased after the loans have been acquired by the Enterprise. Pool insurance transactions are structured with an aggregated loss amount, similar to the detach point concept. The Enterprises, as policy holders, could retain some portion of the first loss. The cost of pool level insurance is generally paid by the Enterprise, not the lender or borrower. As an example of a pool level insurance transaction, a policy might insure all pool losses in excess of 100 basis points applied to the initial principal balance of the pool, with an aggregate loss amount equal to 300 basis points applied to the initial principal balance of the pool. Pool insurance policies pay claims based on actual losses, but may have a limit to the amount of coverage at the loan level and/or an aggregate pool level (stop-loss) limit.

Credit risk transfer pool level insurance has been provided primarily by reinsurance companies putting their own capital at risk, although in an early transaction, a traditional mortgage insurance company insured a pool of loans. The current focus of the credit risk transfer program is on obtaining broad participation by reinsurance companies. Fannie Mae's reinsurance risk transfer transactions are known as Credit Insurance Risk Transfer (CIRT), and Freddie Mac's reinsurance transactions are known as Agency Credit Insurance Structure (ACIS). One advantage of conducting transactions with reinsurers is that they are generally diversified in their risk exposures. This may result in lower counterparty risk because their book of business risk should be less correlated with the Enterprise's book of business risk and thus may be better able to withstand a home price stress cycle than a monoline mortgage insurer. Unlike individual loans that involve primary MI, the Enterprises further reduce counterparty risk in pool level transactions through collateral requirements.

# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Many reinsurance companies do not wish to or are not licensed to write policies directly to non-insurance companies, such as the Enterprises. Thus, although it is the reinsurance company that ultimately provides all of the risk capital, if the reinsurer is not writing the policy directly to the Enterprise, an insurance company must stand in the middle of the transaction. In many cases, this insurance company is a “protected cell,” that is, a vehicle established to write insurance policies solely for the insured and to transfer that risk to reinsurers. The cell is used exclusively for Enterprise credit risk transfer purposes. This structure enables reinsurers who are unwilling or unable to write policies directly to the Enterprises to participate in the credit risk transfer program, thus widening the pool of available capital. The protected cell acts purely as a pass-through entity and takes no credit risk itself. This structure is shown in Figure 4 below. In other cases, the reinsurance companies write policies directly to the Enterprises or through an insurance subsidiary.

Figure 4. Illustrative Reinsurance



Source: FHFA

## ADDITIONAL LOAN-LEVEL MORTGAGE INSURANCE (DEEPER MI)

“Deeper” MI, in the form of deeper mortgage insurance coverage on loans already insured with charter compliant coverage or on loans not requiring charter coverage (i.e. loans with LTV at or below 80 percent), would also qualify as a credit risk-transfer transaction. There are many ways to structure such a transaction that are now being researched and considered. One option would be to structure the deeper MI to be purchased by borrowers or lenders prior to the loans being acquired by the Enterprise, but this MI could also be purchased by the Enterprise directly. Such a structure would qualify as a front-end deal in the context of lender risk sharing transactions. As of July 2015, no deeper MI type transaction has occurred.

## FRONT-END LENDER RISK SHARING TRANSACTIONS

Front-end (or upfront) lender risk sharing transactions include various methods of credit risk transfer where an originating lender or aggregator retains a portion of the credit risk associated with the loans that they sell to the Enterprises. In this case, the credit risk sharing arrangement is entered into prior to the lender delivering the loans to the Enterprise. In exchange for retaining a portion of the credit risk, the lender typically receives a reduced guarantee fee charge on the loans from the Enterprise. The Enterprise will require some form of collateral or other mechanism to offset the counterparty risk inherent in the transaction. These types of transactions are generally described as lender recourse or indemnification arrangements (hereafter referred to as recourse), or collateralized recourse. The structures can also take a certificated (security) format, which allows the originating lender to either hold the credit risk or sell it to credit investors by selling the securities bearing the credit risk created through the transaction.<sup>6</sup>

One benefit of the recourse structure in which the credit risk is retained by the lender is that it aligns the interest of the lender and servicer with the credit risk purchaser and the Enterprise. The TBA market is not affected by these structures because the underlying loans are pooled into Enterprise-guaranteed MBS, which are sold to interest rate investors. The Enterprises have already executed a number of collateralized front-end recourse-type transactions, and more are scheduled.

## SENIOR-SUBORDINATE SECURITIZATION

In a senior-subordinate (senior-sub) securitization, the Enterprise sells a pool of recently originated and acquired mortgages to a trust that securitizes cash flows from the pool into several tranches of bonds, similar to private label security transactions. The subordinated bonds, also called mezzanine and first-loss bonds, provide the credit protection for the senior bond. This structure is shown in figure 5. These subordinated bonds are structured to absorb the expected and unexpected credit losses on the mortgages backing the senior-sub transaction. The Enterprise retains a five percent vertical slice of the mezzanine and first-loss bonds sold. Unlike STACR and CAS or credit-linked notes, the bonds created in a senior-sub transaction are mortgage-backed securities, not synthetic securities. In addition, unlike typical MBS issued by the Enterprises, only the senior tranche is credit guaranteed by the Enterprise, and the senior tranche is not TBA-eligible. In July 2015, Freddie Mac completed the first senior-sub risk transfer transaction.

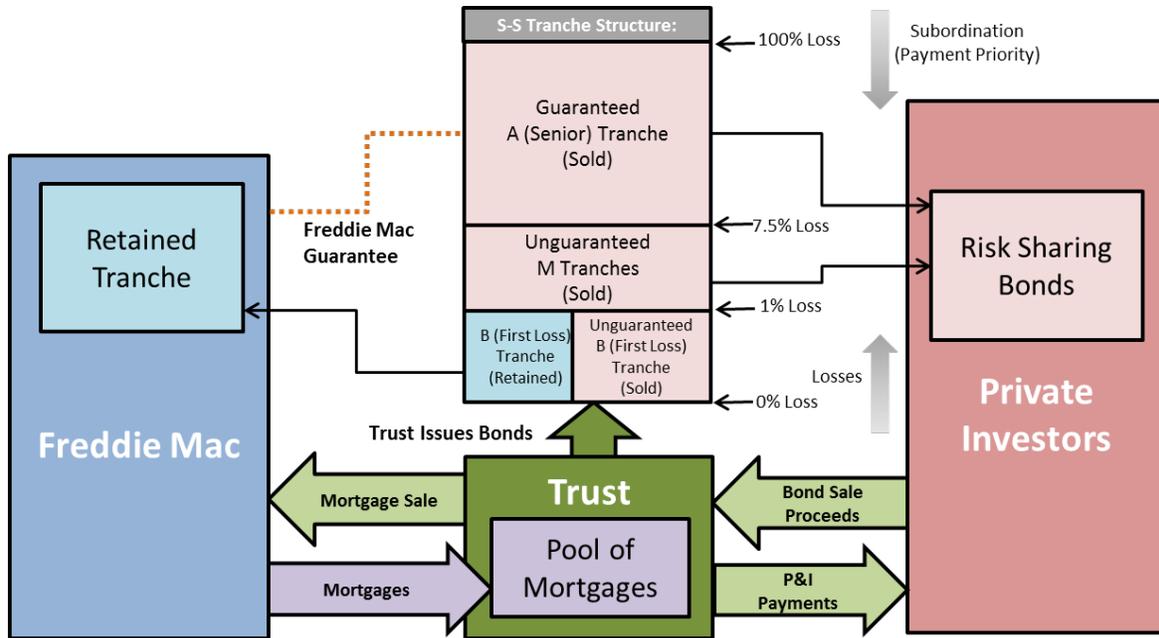
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<sup>6</sup> The transaction known as a Madison Avenue Security is an example of a certificated recourse deal.



# Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

Figure 5. Illustrative Senior-Subordinate Securitization



## CONCLUSION – THE FUTURE OF CREDIT RISK TRANSFER

### FHFA'S NEAR-TERM GOALS

FHFA believes that credit risk transfer transactions can reduce the Enterprises' overall risk and, therefore, reduce risk to the taxpayers. Although much has been accomplished to date, this program to develop an entirely new asset class is just three years old. Going forward, FHFA will continue to encourage the Enterprises to engage in large volumes of meaningful credit risk transfer by setting specific goals in the annual conservatorship scorecard and by working closely with Enterprise staff to develop and evaluate alternative credit risk transfer structures. In particular, FHFA and the Enterprises will work to improve the following aspects of the credit risk transfer program:

- Develop better measures of credit risk and the amount of risk transferred;
- Broaden the investor base for these transactions to attract a diverse and durable source of private capital;
- Refine transaction structure designs to improve execution;
- Develop a more diverse mix of structures to better withstand market fluctuations;

## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

- Expand credit risk transfer to other types of loans, such as adjustable-rate mortgages, 15-year mortgages, and others, where the economics make sense;
- Explore methods to facilitate greater use of credit risk transfer, such as obtaining real estate mortgage investment conduit (REMIC) treatment for CLNs; and
- Implement the CLN structure, which has many advantages as compared to the Enterprise-issued STACR/CAS debt structure.

### MARKET STABILITY THROUGH THE HOUSING PRICE CYCLE

The Enterprises' programs to transfer credit risk to the private sector are an innovative effort involving creation of new markets for which many unknowns remain. Because the programs have not been implemented through an entire housing price cycle, it is too soon to say whether the credit risk transfer transactions currently ongoing will make economic sense in all stages of the cycle. Specifically, we cannot know the extent to which investors will continue to participate through a housing downturn. Additionally, the investor base and pricing for these transactions could be affected by a higher interest rate environment in which other fixed-income securities may be more attractive alternatives.

Ideally, the market for credit risk transfers would be able to weather the entire housing price cycle. FHFA believes that the best way to provide a stable and resilient market for credit risk transfers is for the Enterprises to do the following:

- Develop innovative methods of credit risk transfer that encourage investment throughout the housing market cycle, particularly during adverse market conditions as experienced in 2008;
- Use multiple types of transactions designed to attract a wide variety of investors;
- Continue to expand the investor base for securitized products as well as look for additional sources of private capital to participate in credit risk transfer activities;
- Issue a large enough volume of transactions to ensure a liquid primary market for securitized investment products such as STACR and CAS;
- Encourage a liquid secondary market for securitized products that gives investors a viable exit strategy;
- Avoid flooding the market for any particular type of risk transfer product in a way that leads to poor transaction economics or causes investors to abandon the market because the value of their existing holdings is reduced;
- Encourage standardization of credit risk transfer in the long term, so that the market for credit risk transfer becomes as deep and liquid as possible;



## Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions

- Encourage a diverse group of financial, advisory, and housing-oriented companies, including minority- and women-owned businesses, to participate in credit risk transfer transactions in order to build a stable pool of third-party service providers and provide necessary competition to ensure an efficient market for their services; and
- To the maximum extent feasible, continue to provide transparency and facilitate an open exchange of information by being open to new ideas and input and encouraging greater information sharing among industry participants and policy makers.

