

The Trillion-Dollar Marketplace

Fannie Mae and Freddie Mac credit risk sharing transactions provide new opportunities for insurers

OVER THE PAST SEVERAL YEARS, Fannie Mae and Freddie Mac—the government-sponsored enterprises, referred to in this article as GSEs—have entered into credit risk sharing transactions to reduce taxpayer exposure to the mortgage credit risk assumed through their operations. To date, these credit risk sharing transactions have covered a portion of the credit risk related to reference pools of mortgages totaling over \$900 billion at issuance, with the cumulative total expected to exceed \$1 trillion in 2016.

As the GSEs' capital is mandated to decrease over the next several years and their regulator encourages additional credit risk sharing transactions, it is likely that credit risk sharing transactions on mortgages will increase in frequency, diversity, and volume. The risk-and-reward profile of these credit risk sharing transactions can be an attractive avenue for insurance companies to deploy capital, either from the asset side of the balance sheet or through participation in the insurance structures.

Before deciding to invest or insure such risks, however, it is important to understand the drivers of default and potential performance volatility inherent in participation.

What Is GSE Credit Risk Sharing?

The GSEs play an important role in the housing market by freeing up capital for lenders to issue mortgages. That is, the GSEs purchase, package, and sell the cash flows resulting from a collection of mortgages to investors. These structures are known as “mortgage-backed securities,” or MBS. By purchasing the mortgages from lenders, the GSEs free up capital for lenders to make additional loans.

To encourage investment in the MBS market, the GSEs guarantee the credit risk of the securities sold to investors,

guaranteeing full payment of principal and interest to the investors in the event of credit events on the underlying collateral. A credit event occurs at the point of disposition in the event of a default on a mortgage.

In compensation for assuming the credit risk, the GSEs collect Guarantee Fees, which are paid by borrowers through the interest rate on the mortgage. For example, if the mortgage rate is 5 percent, then 0.50 percent may be retained by the GSEs; the remaining interest portion of the mortgage payments will be passed to investors or offset expenses incurred in securitizing the mortgages. Guarantee Fees can be thought of as (and are similar to) monthly premiums to an insurer.

Credit risk sharing transactions refer to structures that transfer the GSEs' credit risk to other financial institutions. In these transactions, the cash flows passed to market participants are based on a reference pool of mortgages, are not guaranteed, and include credit risk to the underlying mortgages. That is, if a mortgage in the underlying reference pool defaults, the investor may not receive 100 percent of the expected principal and interest for that loan, but rather some principal amount less than 100 percent, and the investor may forgo expected interest payments. The primary vehicle for

this credit risk sharing thus far has been prefunded capital markets transactions in which asset managers, hedge funds, banks, insurance companies, and others buy shares of debt transactions.

In addition to these investors assuming credit risk through debt transactions, the GSEs have purchased or included within the structure insurance contracts in which a portion of the Guarantee Fee may be passed on to an insurer to provide insurance in front of the GSEs. These insurance contracts have been placed with mortgage insurance companies as well as global reinsurers.

What Is Driving GSE Credit Risk Sharing?

In recent years, the GSEs have generated substantial amounts of capital through the course of normal operations. Underwriting standards for mortgages in the United States have significantly increased relative to those underlying the mortgages that contributed to the global financial crisis, and home prices are still below peak values in the markets that experienced the steepest home price declines. In addition to generally tighter underwriting standards, the Guarantee Fee charged for guaranteeing mortgage credit risk has increased relative to that charged for similar loans prior to the global financial crisis.

This, and other factors, has resulted in the GSEs generating income and paying cumulative dividends of \$144.8 billion and \$96.5 billion for Fannie Mae and Freddie Mac, respectively.¹ Given the above, it is reasonable to ask: Why are the GSEs offloading this exposure to third parties?

During the global financial crisis, the GSEs received substantial support from

the government in the form of draws on the U.S. Treasury and were placed into conservatorship under the newly created Federal Housing Finance Agency (FHFA) as losses accrued on the collateral underlying their guaranteed securities. As part of conservatorship, FHFA has mandated that the GSEs use risk-share transactions to reduce the potential exposure to taxpayers in the event of further credit events. Risk-share transactions help reduce taxpayers' exposure to potential credit events by transferring the risk to third parties, similar to a re-insurance transaction for a direct writer. In other words, the GSEs are participating in credit risk sharing transactions because they are mandated to do so by their current regulator.

Evolution of the GSE Credit Risk Sharing Market

The initial investigation into ways to transfer mortgage credit risk from the GSEs to the private sector was discussed in FHFA's 2011 report to Congress. Over the next two years, FHFA continued to work with the GSEs to develop new risk sharing transactions, culminating in the advent of the modern GSE risk-share transaction with the issuance of a credit risk sharing security in July 2013. Since that point, FHFA has continued to encourage the expansion of credit risk sharing offerings through its annual conservatorship scorecards (see Figure 1).

As shown in Figure 1, FHFA continues to place a strong focus on transferring the GSEs' mortgage credit risk to the private sector. In response to this focus, the GSEs have increased the number of transactions, the volume of UPB covered, and the variety of credit risk transfer offerings to the marketplace. The majority

FIGURE 1:
Risk Sharing Objectives Included in Conservatorship Scorecards

Scorecard	Risk Sharing Objectives
2012	<ul style="list-style-type: none"> ▶ Initiate risk sharing transactions by Sept. 30, 2012. ▶ Execute new risk sharing transactions beyond the traditional charter-required mortgage insurance coverage. ▶ Propose timeline for continued growth in risk sharing through 2013.
2013	<ul style="list-style-type: none"> ▶ Each GSE will demonstrate the viability of multiple types of risk transfer transactions involving single-family mortgages with at least \$30 billion of unpaid principal balances (UPB) in 2013.
2014	<ul style="list-style-type: none"> ▶ Each GSE will transact credit risk transfers on single-family mortgages with at least \$90 billion of UPB adjusted for the amount of credit risk transferred. ▶ Each GSE must utilize at least one transaction type in addition to the credit risk sharing structures used in the prior year (e.g., insurance, upfront credit risk transfers, and senior/subordinated securitizations).
2015	<ul style="list-style-type: none"> ▶ Fannie Mae will transact credit risk transfers on reference pools of single-family mortgages with a UPB of at least \$150 billion. ▶ Freddie Mac will transact credit risk transfers on reference pools of single-family mortgages with a UPB of at least \$120 billion. ▶ In meeting the above targets, the GSEs must each utilize at least two types of risk transfer structures.
2016	<ul style="list-style-type: none"> ▶ Transfer credit risk on at least 90 percent of the UPB of newly acquired single-family mortgages in loan categories targeted for risk transfer. <ul style="list-style-type: none"> —For 2016, target single-family loan categories include non-HARP, fixed-rate terms greater than 20 years, and loan-to-value ratios above 60 percent. ▶ Transfer a substantial portion of the credit risk on the targeted loan categories covering most of the credit losses projected to occur during stressful economic scenarios. ▶ Continue efforts to evaluate, and implement if economically feasible, ways to transfer credit risk on other types of newly acquired single-family mortgages that are not included in the targeted loan categories. ▶ Continue to evaluate obstacles to expanding the investor base, propose ways to overcome these challenges, and work with FHFA to address them where possible.

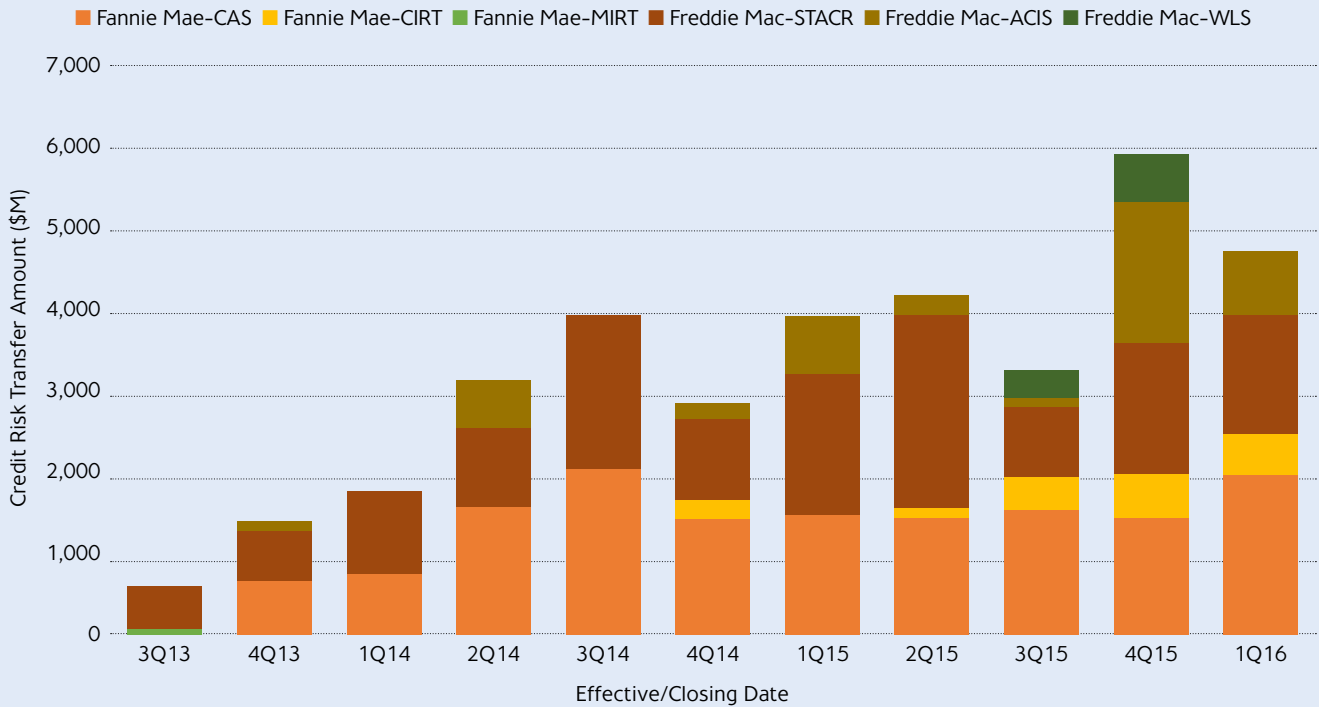
of transactions to date are pre-funded capital markets transactions known as the Freddie Mac Structured Agency Credit Risk (STACR) and Fannie Mae Connecticut Avenue Securities (CAS). However, the GSEs have also transferred substantial credit risk through the Freddie Mac Agency Credit Insurance Structure (ACIS) and the Fannie Mae Credit Insurance Risk Transfer (CIRT) credit insurance transactions, pool mortgage insurance transactions (e.g., the Fannie Mae MIRT), and whole loan securities (WLS) transactions (e.g., the

Freddie Mac WLS). For perspective on the evolving marketplace, Figure 2 shows the various transactions performed to date by the type of transaction.

In addition to the sheer volume, the credit risk transferred has continued to evolve over time as the GSEs seek to meet diverse investor appetite. For instance, while the initial STACR and CAS offerings only included mezzanine tranche positions reflecting subordinate GSE credit enhancement, some recent offerings include first-loss positions without any credit enhancement. Similarly, while

FIGURE 2:

History of GSE Risk Sharing Transactions



the initial transactions covered loans with original loan-to-value (LTV) ratios between 60 and 80 percent, other transactions were created that covered loans with original LTV ratios greater than 80 percent, which were also covered by private mortgage insurance. Higher LTV ratios are generally associated with higher levels of default risk.

In general, the underlying collateral in the earlier transactions were generally mortgages with very low default risk. More recent transactions have started to explore collateral with more varied credit risk profiles. While the increase in variety of offerings should help meet diverse investor demand, it also increases the necessity for broader understanding of the mortgage credit risk performance drivers.

New Risks Require New Tools

Historically, participation in and evaluation of the mortgage credit risk market has been limited to banks, mortgage insurance and financial guaranty companies, and government

entities. Non-monoline insurance companies have had limited opportunities to assume mortgage credit risk and some potential market participants have been hesitant to enter the market, given the losses incurred during the global financial crisis. As new participants begin to enter the marketplace, it becomes increasingly important to educate the market on the underlying mortgage credit risk performance drivers.

To increase transparency into the risks accepted by the GSEs and to provide market participants with data to analyze the risk of investing in the credit risk sharing transactions, the GSEs started publishing loan-level data, including monthly performance records for certain mortgages guaranteed by the GSEs from 1999 through 2015. The data includes underwriting characteristics, such as borrower credit score and LTV ratio, as well as monthly performance data.

When evaluating the credit risk of mortgage collateral, there are two important items to consider: the credit quality

of the underlying collateral and the economic environment over the life of the collateral. The credit risk of the underlying collateral is often estimated through evaluation of variables such as borrower credit score, LTV ratio, occupancy type, and others. The presence of risky features (such as a low credit score or high LTV ratio) can be evaluated individually, but it is also important to consider the compound effect of multiple “risk factors” on a given mortgage. For example, a mortgage on an investment property with limited documentation would have two compound risk factors and have a higher credit risk compared with a similar mortgage on an owner-occupied property with full documentation.

Similar to corporate bonds, default rates on mortgage collateral are correlated with the economic environment, and sensitivity analysis to alternative economic events is extremely important. Key economic indicators for mortgage performance are regional home prices, unemployment rates, and movements

in interest rates. A significant driver of mortgage credit risk from economic events that should be evaluated in analysis of mortgage collateral is the movements in home prices. Historical credit events have been significantly higher when home prices fell (resulting in negative equity for the borrowers) compared with economic scenarios in which home prices were increasing.

Fannie Mae provides good tutorials on its website on methods to process the data and develop such models.² Regression or segmentation analysis can be performed on the loan-level data published by the GSEs to develop models to estimate mortgage performance. Mortgage performance models may also be purchased from third parties to assist with the estimation of the credit risk underlying specific securities. After developing perspectives on the underlying collateral performance, the mortgage collateral estimates can be combined with the transaction structures to develop cash-flow estimates for the relevant participations.

The Opportunity for the Insurance Marketplace

Given FHFA's focus on de-risking the GSEs, mortgage credit risk offerings are likely to continue to become more prevalent in the marketplace as the GSEs seek to meet their annual conservatorship scorecard requirements and reduce capital. According to FHFA's 2015 conservatorship scorecard, Fannie Mae and Freddie Mac were instructed to collectively transact credit risk transfers on reference pools of mortgages of at least \$270 billion for the year. In actuality, the GSEs' transactions covered reference pools exceeding \$400 billion of the nearly \$1 trillion of mortgages acquired by the GSEs in 2015. The 2016 scorecard requires the GSEs to transfer the credit risk on at least 90 percent of the unpaid principal balance of targeted groups of newly acquired mortgages, which represents the majority of expected acquisitions. Thus, it can be assumed that there will be a similar level or greater amount of credit risk transferred in

2016, assuming GSE mortgage acquisition levels remain consistent with 2015 acquisitions.

Insurance companies will have the opportunity to participate in this marketplace in 2016 through investment opportunities in the STACR and CAS debt structures as well as by writing credit insurance through anticipated ACIS and CIRT transactions. While the debt offerings require principal outlays equal to 100 percent of the notional amount of the securities, the credit insurance transactions to date have typically only required collateral between 15 and 20 percent of the credit risk assumed. The collateral requirements for the credit insurance transactions vary based on the rating of the insurance entities assuming the risk and the type of participation. For context, the \$2.8 billion of credit insurance risk placed through the 10 Freddie Mac ACIS transactions in 2015 required minimum collateral of approximately \$440 million (or approximately 16 percent of the risk assumed).

These debt securities and insurance opportunities may offer attractive risk/return profiles to strategic companies in the insurance sector. However, before entering into such agreements, it is important to understand the risk profile of the underlying collateral and the performance volatility inherent in the structure of the transactions. With data being published by the GSEs, it is now easier than ever before to evaluate the risk profiles of these exposures. □

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Endnotes

1. Freddie Mac Investor Presentation (November 2015). Fannie Mae 2015 Q3 Quarterly Report.
2. Fannie Mae Single-Family Loan Performance Data; Fannie Mae. Retrieved from <http://www.fanniemae.com/portal/funding-the-market/data/loan-performance-data.html> on Feb. 28, 2016.



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