Key Considerations for the Future

OF THE SECONDARY MORTGAGE MARKET AND THE GOVERNMENT SPONSORED ENTERPRISES (GSEs)

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The Mortgage Bankers Association's Council on Ensuring Mortgage Liquidity

MORTGAGE BANKERS ASSOCIATION®

Investing in communities

The secondary mortgage market is broken. Investors have lost faith, lenders are limited in their ability to provide financing, and the federal government, through FHA, Fannie Mae and Freddie Mac, is the only major source of liquidity to the market.

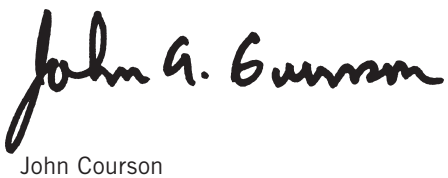
In response to this crisis, the Mortgage Bankers Association (MBA) established the Council on Ensuring Mortgage Liquidity. The Council is a group of 25 leaders from the real estate finance industry who are working to provide a framework for a renewed secondary mortgage market with an initial focus on the government-sponsored enterprises (GSEs). The Council includes representatives from across the industry. The single-family, multifamily and commercial sides of the industry are represented, as are depository institutions, mortgage banking firms, mortgage insurers and more.

The Council's mission is to look beyond the current crisis, to what a functioning market should look like for the long-term. As a first step, on November 19, 2008, the Council hosted a summit that brought together academics, industry professionals, regulators and others to discuss what fundamental elements are required for a functioning secondary market. This white paper is drawn in part from that summit, and has been developed as input to the Council's deliberations.

The paper has been designed to provide a common foundation and language as the policy discussions take shape. As the introduction notes, "This paper is not a policy statement — it makes no attempt to weigh the merits of different systems or to recommend one or more approaches. Rather, this paper presents a set of building blocks from which policymakers, industry representatives, academics and others can begin to understand and discuss the merits of different options and recommendations." We trust that it will serve as a valuable resource.

In coming weeks and months, the Council will build on the work of the summit and this paper to identify key principles that policymakers and others should consider when evaluating proposals that will affect the market's future. The MBA looks forward to working closely with Congress and the Administration to ensure that legislation and regulatory reforms are enacted that will redesign the GSEs and will help speed the return of liquidity to the mortgage market.

Until recently, the U.S. mortgage market was the most liquid credit market in the world. It is our hope that with timely, deliberate planning and collaboration, it soon will be again.



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CONTENTS

EXECUTIVE SUMMARY

A secondary mortgage market provides liquidity by attracting money from investors to real estate finance borrowers. Mortgages compete for investors' funds with a wide range of other investment options, including stocks, other bonds and various alternative investments. In exchange for providing capital to borrowers, investors receive, in some form, a share of the interest and principal payments made by a borrower repaying the loan.

A wide range of mechanisms have been developed to funnel investment dollars into mortgages. Each mechanism takes advantage of different methods of spreading interest rate and credit risk among participants. Each mechanism also provides differing levels of involvement for the investors. At any one time, most, if not all, of the mechanisms may be in use in the market. For example, some investors simply buy and hold whole loans. For other investors, instruments have been created like Fannie Mae's and Freddie Mac's pass-through mortgage-backed securities (MBS), and Ginne Mae's guaranteed pass-through MBS for FHA and VA loans. Other investors have preferred private label residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS) that are broken out into different risk tranches (AAA, AA, etc.). Finally, some of these instruments have been reconfigured and packaged into CMOs and CDOs.

A number of key considerations come to the fore when thinking about how best to restore the secondary mortgage market. The careful consideration of these factors will be essential as policy makers and others assess the relative strengths and weaknesses of different models for the secondary market and the GSEs. These areas will need to be addressed regardless of what model or models become successful. Some of these areas are:

RISK ASSESSMENT: Risk assessment is an imperfect science, but it is at the heart of all secondary market actions. Given the importance of risk assessment, an effective secondary market must promote accurate, effective and stable risk assessment. Equally important, third-party assessments of risk must be highly credible to be widely used or adopted.

ALIGNING RISKS, REWARDS AND PENALTIES: A key consideration for the market going forward will be ensuring the alignment of risks with rewards and penalties. Loan attributes, such as whether a loan is adjustable-rate or fixed rate, or does or does not have a prepayment restriction, shift risks between the borrower and the investors. If investors or other market participants are not accountable for the risks they take on, they are prone to act irresponsibly by taking on greater risks than they otherwise would.

ALIGNING REWARDS WITH LONG-TERM PERFORMANCE: Given the long-term nature of a mortgage contract, as well as the imperfect state of risk assessment, some risks inherent in a mortgage asset may not appear for some time after the asset has changed hands. It is important to consider the degree to which participants in the mortgage process can be held accountable for the long-term performance of an asset.

ENSURING CAPITAL ADEQUACY OF PARTICIPANTS: Participants throughout the market need adequate levels of capital to protect against losses. Capital adequacy is keenly dependent on the assessment of risks outlined above. The greater the risks, as assessed, the greater the capital needed. In times of rapid market deterioration, when model and risk assumptions change dramatically, capital needs may change dramatically as well. If market participants that have taken on certain risks become undercapitalized, they may not be able to absorb those risks when necessary — forcing others to take on unanticipated risks and losses.

CONTROLLING FRAUD BETWEEN PARTIES IN THE SYSTEM: Given the size and scope of the mortgage market, there is potential for market participants to perpetrate fraud against other participants. A key consideration for an effective secondary mortgage market is the degree to which the market minimizes fraud. Key considerations include the ability to identify and prosecute fraud, and the degree to which fraud is deterred.

TRANSPARENCY: In order to attract investors, another key consideration for a secondary mortgage market is its transparency. The less transparent a market is, the more poorly understood it will be by investors, and the higher will be the yield those investors demand to compensate for the uncertainty. Accounting rules also affect how firms report the sale of mortgages and mortgage-related assets. In some instances, these rules have clouded the transparency of who holds certain assets, the risks associated with them and the capital required to adequately support them. Rules that affect the ways in which firms account for the sale of structured securities and how they mark their assets to market will have a profound impact on the shape that a future secondary market can take.

All the potential models for the secondary market and the GSEs involve tradeoffs. No one model results in a perfect combination of attributes for all investors in mortgages, which is one of the reasons we have historically seen multiple models. In order to be successful, a potential model needs to demonstrate its strengths and weaknesses in the following areas:

MEANS OF ATTRACTING A BROAD ARRAY OF INVESTORS: The secondary mortgage market has attracted a broad array of investors in recent years, including mortgage professionals steeped in the intricacies of the mortgage market as well as mid-tier and smaller investors with only a passing knowledge of mortgages or mortgage securities. A key consideration for future markets is how to again attract all levels of investors, whether through transforming credit and interest rate risk into counterparty risk, providing credible third-party assessments of risks or some other means.

LENDER / LIQUIDITY OF LAST RESORT: Even an effective secondary mortgage market will occasionally meet with periods of illiquidity. During such times, it has proven beneficial to have a "lender of last resort" that is willing to step in and absorb the cost of the illiquidity of certain assets.

TRANSITION: The secondary mortgage market is in an extremely fragile state. A key consideration for any actions regarding its future will be how to transition from the market's current state, to its desired state. The size of the market, and the depth of its infrastructure, will make any such transition a significant challenge.

INTRODUCTION

On November 19, 2008, the Mortgage Bankers Association's Council on Ensuring Mortgage Liquidity hosted the *Summit on the Future of the Secondary Mortgage Market and the Government Sponsored Enterprises (GSEs).* The Summit brought together 130 thought-leaders from industry, academia, government regulators, think-tanks and trade groups to discuss the recent failures of the secondary mortgage market and what is needed for a future system to be successful.

This white paper provides a framework for understanding the role of the secondary mortgage market and the GSEs and some of the key considerations for their futures. **This paper is not a policy statement — it makes no attempt to weigh the merits of different systems or to recommend one or more approaches.** Rather, this paper presents a set of building blocks from which policymakers, industry representatives, academics and the public can begin to understand and discuss the merits of different options and recommendations.

This paper is divided into four sections. The first section discusses the role of the secondary mortgage market, specifically in terms of the distribution of credit risk and interest-rate risk. The second section discusses various mechanisms through which the secondary market allows investors to fund mortgages and other mortgage-related assets. The third section discusses the key considerations for a restored secondary mortgage market, with a special focus on the items highlighted at the November 19 Summit. The fourth section reviews some of the secondary market models most frequently mentioned in public policy and other circles. A glossary at the end of the paper defines some of the key terms, including those found in bold throughout this paper.

SECTION I: A SECONDARY MORTGAGE MARKET

A **secondary mortgage** market attracts money from investors to real estate finance borrowers. Investors range from banks and thrifts putting deposits to work, to pension funds and life insurance companies investing contributions or premiums, to hedge funds seeking to maximize returns for investors, to central banks from countries around the globe. Borrowers include individuals and families purchasing or refinancing a home as well as real estate developers and investors building, purchasing or refinancing multifamily housing and other commercial properties with the intent of renting or leasing the space. As the industry has grown, participant roles have become more specialized. In many cases, different parties originate, underwrite, securitize, service and invest in the loan.

Mortgages compete for investors' funds with a wide range of other investment options, including stocks, other bonds and various alternative investments. In exchange for providing capital to borrowers, investors receive, in some form, a share of the interest and principal payments made by a borrower repaying the loan. Mortgage-related investments carry with them two fundamental forms of risk that must be assessed, priced, distributed and/or mitigated by the investor: credit risk and interest rate risk. (Other forms of risk such as liquidity, operational or reputation risk are not addressed here.) A key function of the secondary market is the pricing and distribution of these risks.

Credit risk is the risk associated with the borrower becoming unable to repay the loan, triggering the lender to foreclose on the property or to take other actions. In such cases, the lender will look to the loan collateral — usually the property itself and sometimes additional letters of credit or other assets — to repay the principal and any interest still owed on the loan. Credit risk is often thought of in terms of the **probability of default** of the loan, and the severity of a **loss given a default.** Investors attempt to control credit risk through underwriting that assesses the borrower's ability to pay (to minimize the probability of default) and the value of the collateral relative to the loan amount (to minimize the loss given default). Products such as **mortgage insurance** can be used to transfer credit risk from the investor to a third-party.

Interest rate risk is the risk associated with changes in interest rates. Because many single-family mortgages do not have prepayment restrictions, the borrower has the ability to prepay the loan at any point. If the interest rate environment changes and rates drop, borrowers are likely to refinance their loans at a lower rate, and the investors will be repaid more quickly than anticipated. Changes in rates can also increase the time over which an investor will be repaid: if rates go up, borrowers will be less likely to refinance. Because investors demand different yields to lend money for different periods of time, a mortgage that is likely to pay off in two years has a very different value (and therefore

interest rate) than one that is likely to pay off in seven years. The **optionality** in mortgages without prepayment restrictions means that interest rate risk is an important part of their valuation. Many commercial/multifamily mortgages have **prepayment restrictions** that minimize the interest rate risk for the investor, thereby reducing the mortgage rate for the borrower.

Adjustable-rate mortgages and prepayment restrictions generally leave the interest rate risk with the borrower. Fixed-rate mortgages and a lack of prepayment restrictions transfer the interest rate risk to the mortgage investor.

Risks and Yields in the Secondary Market: Investors make investment decisions based on the risks and rewards associated with the different investment options available. A U.S. government security is generally viewed as a risk-free investment because there is little chance the government will not honor its obligations to repay the loan principal (little to no credit risk) and the term of the borrowing is fixed (little interest rate risk). In assessing other investment alternatives, investors demand higher yields to compensate them for any additional risks they take on. The interest rate a borrower pays is directly related to investors' assessment of, and appetite for, the risks associated with that loan.

A third form of risk that has come to the fore in the recent credit crunch is the risk of a significant change in the market value of a mortgage asset, not tied to any fundamental changes in the credit or interest rate risks of that asset. Even with no change in the interest rate or credit risks of an asset, shifts in investor demand may radically alter the market price of the asset. Theoretically, such a change would not affect a buy-and-hold investor, as they would continue to receive the yield they anticipated. The requirement that certain investors **mark-to-market** their assets, however, as well as the fact that many senior managers and investors use similar mechanisms for portfolio review, means that fluctuations in the market price of mortgage-related assets can represent a major risk to investors. Because this pricing risk is inherent in all investment vehicles, it is not discussed in subsequent sections in the same way that credit and interest rate risks are.

An effective secondary market allows participants to identify, assess, price and distribute the credit, interest rate and other risks of each investment vehicle.

SECTION II: METHODS OF INVESTING IN MORTGAGES

A wide range of mechanisms have been developed to funnel investment dollars into mortgages. Each mechanism takes advantage of different methods of spreading interest rate and credit risk among participants. Each mechanism also provides differing levels of involvement for the investors. It is important to note that the mechanisms discussed are complementary. At any one time, most, if not all, may be in use in the market.

Whole loans

Examples: Loans held in bank and thrift portfolios, loans held in the portfolios of Fannie Mae and Freddie Mac, loans held by life insurance companies and pension funds.

One of the most common methods of investing in mortgages is through whole loans. Here, the investor holds individual mortgage loans. In exchange for its investment in a mortgage, the investor receives principal and interest payments from the borrowers of the mortgage loans they hold. Unless mitigated or transferred, the investor takes on the entire risk associated with the mortgage, including both credit and interest rate risk. Investors in whole loan mortgages generally require an infrastructure to service the mortgages, including a capacity to receive and process mortgage payments, and to manage individual loan delinquencies, defaults and foreclosures. They also face the task and expense of acquiring a diverse portfolio of loans, preferably across different geographies.

Pass-through Mortgage-Backed Securities (MBS)

Examples: Private-label residential pass-through mortgage-backed securities.

A pass-through mortgage-backed security (MBS) provides the investor with a risk exposure similar to holding a portfolio of whole loans, but without the requirements of acquiring, servicing or managing the individual loans. Principal and interest payments made by borrowers are "passed through" equally to investors in the security. Any losses are shared equally among all investors. A strip of the mortgage payments is retained by the loan servicer to compensate for the services it performs. As with whole loans, investors retain any credit and interest rate risks associated with the underlying loans.

Guaranteed Pass-through MBS

Examples: Ginnie Mae MBS, Fannie Mae and Freddie Mac MBS, "wrapped" private-label MBS.

A guaranteed MBS transfers the credit risk of the mortgage pool to a third-party. The third-party provides some level of guarantee for the principal invested. The guarantor can be a private or public institution, including the federal government. In exchange, a strip of the borrower's principal and interest payments is paid to the guarantor. A guaranteed MBS will generally retain the interest rate risk associated with the underlying pool of mortgages. In guaranteed MBS, investors look more to the **counterparty risk** associated with the guarantor and less to analysis of the credit risk of the underlying mortgages. Unless it is mitigated, investors still need to assess and price the interest rate risk, with **prepayment speeds** being a key driver of the MBS' pricing.

Structured Residential Mortgage-Backed Securities and Commercial Mortgage-Backed Securities (CMBS)

Examples: Private-label residential mortgage-backed securities or commercial mortgage-backed securities (CMBS). Both are often held in a trust entity called a ***Real Estate Mortgage Investment Conduit*** *(REMIC).*

Structured residential mortgage-backed securities and commercial mortgage-backed securities (CMBS) strip out various risks inherent in a pool of mortgages and build securities tied to, or protected from, each. A typical structured MBS is built with a "waterfall" of payments, where principal and interest payments from borrowers are collected and then paid to the bond holders in a predetermined sequence. The bonds that have first priority of payment are generally the safest (i.e., have the lowest credit risk). Losses accumulate in the reverse order, with the lowest bonds taking losses first. Structured MBS were designed to mitigate credit risk for the holders of the top, safest bonds. Credit risk is concentrated in the lower, riskier **tranches.** Interest rate risk is similarly spread across the tranches. Investors in the safest bonds are willing to receive yields lower than the mortgage interest rate, while investors in riskier bonds will receive yields higher. As with other MBS, a strip of the borrower's payment is retained by the servicer as compensation for its services. Because of their complex structures and the number of parties involved in structured MBS, REMICs can limit the ways in which borrowers and investors are able to respond to unexpected events. Each structured MBS is different, and assessing the credit risk associated with each tranche requires complex models of cash flows and the structure of the waterfall. Rating agencies have been key players in providing external assessments of the credit risks involved in different tranches, and their ratings have become a part of the U.S. regulatory structure.

(Re-)REMICs/CDOs

Examples: single-family REMICs, Commercial/multifamily Re-REMICS, collateralized debt obligations (CDOs).

Re-REMICs and collateralized debt obligations (CDOs) are similar to structured MBS. In addition to mortgages, these investment vehicles can also hold other debt, including structured MBS and even other Re-REMICs and CDOs. A re-REMIC or a CDO, for example, may pool a variety of structured MBS, and then create a new set of structured bonds using the cash flows from the pooled MBS to support the new bonds' cash flows. The re-REMIC or CDO may pool low-risk tranches in an effort to increase the credit support of the new bonds, or may pool higher-risk tranches in an effort to increase the investors' yield. CDOs and Re-REMICS can thus considerably concentrate the risks (and rewards) associated with mortgage assets. The diversity gained from the multiple underlying bonds is intended to reduce risks. Investors looking to invest in the new bonds have to look across multiple underlying securities, and the myriad loans in each, to understand the underlying risk characteristics of their investment. These structures and the associated risks are often very complex. Accordingly, many investors have relied on rating agencies for assessments of the collateral and of the credit risks in these vehicles.

Mortgage REIT

Examples: Publicly- and privately-traded real estate investment trusts.

Real Estate Investment Trusts (REITs) are tradable investment vehicles for real estate-related assets. A REIT raises funds from equity investors and usually leverages this capital by borrowing additional funds. A mortgage REIT uses its funds to buy and sell mortgages and mortgage-related investments. To maintain its REIT status, tax laws dictate that a REIT must distribute at least 90 percent of its taxable income to shareholders annually in the form of dividends. The REIT, and its investors, takes on the credit and interest rate risks associated with the mortgages in which it invests.

Corporate debt

Examples: Corporate bonds issued by banks, thrifts, finance companies, etc.

Another option for investors is to lend directly to an institution that holds mortgage assets. The institution uses the borrowed funds to make or purchase mortgages. Corporate revenues, including the principal and interest payments of the mortgage assets, are used to pay the debt service of the borrowed funds. The corporation benefits from the difference between the higher yield on the mortgage-assets that they receive and the lower yield on the corporate debt that they pay. Even if a mortgage asset fails to pay, or pays off, the institution continues to pay the investor. The interest rate and credit risk of the mortgages are generally held by the institution rather than the investor, although **call and put options** provide a means to transfer the interest rate risk between parties. Rather than interest rate or credit risk, the

investor faces counterparty risk. If the institution cannot cover its debt payments, the investor faces the prospect of joining other creditors in a bankruptcy or similar claim. In corporate debt, the corporation faces credit and interest rate risk, while the investor faces counterparty risk.

Guaranteed corporate debt

Examples: Corporate debt issued by Fannie Mae, Freddie Mac and the Federal Home Loan Banks (FHLBs).

Guaranteed corporate debt is similar to corporate debt, but with an added layer of insurance through a guarantee by a third-party. If the institution fails, the third-party fulfills the institution's repayment responsibilities. The guarantor can be a private or public institution, including the federal government. An investor's counterparty risk in the corporate debt is mitigated by the addition of another, usually stronger, counterparty. In the case of Fannie Mae and Freddie Mac corporate debt, the third-party guarantor has generally been assumed to be the federal government.

Secured debt and covered bonds

Examples: Secured loans to banks, thrifts, finance companies, etc.; covered bonds issued by banks and others.

Secured debt and covered bonds provide investors with a vehicle similar to corporate debt, but with additional collateral. Like corporate debt, the investor provides a loan directly to an institution that holds mortgage-related assets and the institution uses the borrowed funds to make or purchase mortgage assets. Through secured debt and covered bonds, if the institution fails to fulfill its debt obligations, the investor has a claim directly to the mortgage-related collateral. The interest rate and credit risk of the mortgage assets are generally retained by the institution, while the investor faces counterparty risk, albeit counterparty risk with additional collateral. Investors in covered bonds will generally assess both the counterparty risk of the institution and the credit and interest rate risk of the underlying collateral.

Shareholder equity

Examples: Equity in banks, thrifts, finance companies, Fannie Mae, Freddie Mac, etc.

Investor funds also enter the mortgage market through shareholder equity investments in firms that participate in the mortgage market. The equity investment provides capital that allows the firm to make or purchase mortgages. As equity, it can be leveraged with debt to multiply the amount of mortgage funding available. The equity investor here faces all the interest rate and credit risk retained by the firm, and receives a share of the profits generated. In the case of a bankruptcy of the firm, equity holders only have a claim to the assets remaining after all debts and all senior equity holders receive their share.

SECTION III: KEY CONSIDERATIONS FOR A SECONDARY MORTGAGE MARKET

A number of key considerations come to the fore when thinking about how best to restore the secondary mortgage market. The careful consideration of these factors will be essential as policymakers and others assess the relative strengths and weaknesses of different models.

Risk assessment

Participants in a secondary mortgage market assess and price the risks they take on. As outlined above, key risks include credit risk, interest rate risk and counterparty risk. Risk assessment can take the form of a primary assessment of risk or a secondary assessment.

A primary assessment of risk requires the identification, collection and analysis of pertinent information. In many cases this will involve complex, detailed computer models, such as those that attempt to quantify the credit risk associated with particular borrowers and loans based on credit scores, loan-to-value ratios, local property markets, etc. Other primary assessments of risk may attempt to quantify the interest rate risk associated with different interest rate environments. A secondary assessment of risks relies on assessments made by others, such as the rating agencies or investment banks.

Risk assessment is an imperfect science, but it is at the heart of all secondary market actions. Regulators use their risk models to assess capital adequacy, rating agencies use their models to assign ratings to companies and securities, and investors use their models to assess the relative risk-adjusted returns of various investment options.

Regulators and quasi-regulators (such as the rating agencies) are just as reliant on risk models and their accuracy and assumptions as are any private-sector participants. It is important to note that the transfer of risk assessment from market participants to regulators and quasi-regulators does not, in and of itself, improve the assessment of risk.

As new products are introduced or expanded, the assessment of risk is particularly difficult. Likewise, in times of extreme competition, investors will often compete based on risk as well as price. It is common to see underwriting standards loosen in times of capital availability and tighten in times of capital shortage. If a risk assessment does not fully capture the terms being used to compete, it is likely to misjudge the risks.

As has been seen recently, a rapid change in the perceived risks of mortgage-related assets can lead to dramatic changes in their value and pricing (valuation risk). For example, if a certain type of borrower that was generally thought to be a low or moderate credit risk is, through new information or modeling, perceived by the market to be a more significant risk, the value and pricing of assets dependent on that type of borrower will fall. Volatility and/or mistrust surrounding such risk-assessment and pricing can deter investment.

Given the importance of risk assessment, an effective secondary market must promote accurate, effective and stable risk assessment. Equally important, third-party assessments of risk must be highly credible to be widely used or adopted.

It is also important to note that models are fallible. Regardless of their sophistication, an overreliance on models, particularly when their results diverge from real-world experience, can promote failure in assessing risks.

Aligning risks, rewards and penalties

The secondary mortgage market has been extremely adroit at dissecting the credit, interest rate, counterparty and other risks associated with financing real estate. A key consideration for the market going forward will be ensuring the alignment of risks with rewards and penalties.

Loan attributes, such as whether a loan is adjustable-rate or fixed-rate, or does or does not have a prepayment restriction, shift risks between the borrower and the investors. Investor yields and borrower interest rates are directly affected by this distribution of risks and the expectation of the durability of the distribution.

As the industry has grown, participant roles have become more specialized. In many cases, different parties originate, underwrite, securitize, service and invest in the loan. As a result, participants throughout the mortgage market — from borrowers, to brokers, to lenders, to securitizers, to investors, to regulators — affect the long-term performance of a mortgage asset. Examples include the candor of loan applications, the rigor of underwriting, the accuracy of due diligence and the precision of models.

As participants add or remove risks to the system, it is important that those same participants accrue the costs/benefits associated with the risks they affect.

Similarly, investors in mortgage assets are paid to take on certain risks associated with the assets. If investors are not accountable for the risks they take on, they are prone to act irresponsibly by taking on greater risks than they otherwise would. Concerns about such moral hazard have been most commonly voiced in situations where the federal government bears the ultimate risk, either through GSE debt, federal insurance or a bailout or other after-the-fact intervention.

Regulators and quasi-regulators face a number of challenges in overseeing market participants. Given the enormous scope and innovation of the mortgage markets, regulators are often at a significant disadvantage in trying to identify, understand and evaluate the myriad products and players that make up the market. They also may face a "capture" issue in which their incentives become aligned with the entities they are overseeing or supervising. In such a case, the regulator may become as, or more, concerned with protecting the interests of the regulated institution as with protecting the public good.

A regulator's powers to change the behavior of investors and other market participants may also be limited by the size and scope of the regulated institutions. Institutions that are significantly larger than their regulator may be able to bring technical, political or other resources to bear to promote more amenable regulation.

Aligning rewards with long-term performance

Given the long-term nature of a mortgage contract, as well as the imperfect state of risk assessment detailed above, some risks inherent in a mortgage asset may not appear for some time after the asset has changed hands. It is important to consider the degree to which participants in the mortgage process can be held accountable for the long-term performance of an asset.

Mechanisms such as loan "buy-backs" and risk-sharing agreements have been common secondary mortgage market practices that tie participants to the longer-term performance of assets they affect. In the case of risk-sharing, for example, originators have a direct stake in the longer-term performance of the mortgages they underwrite. It is important to note that such activities transform other risks into counterparty risk – meaning that participants in the market become increasingly reliant on the ongoing health of other market participants and their ability to fulfill their obligations.

Ensuring capital adequacy of participants

Participants throughout the market need adequate levels of capital to protect against losses. Recently firms have faced a need for additional capital because of losses resulting from credit risk (because loans and securities did not perform as modeled). In other cycles, capital has been drawn upon to compensate for unexpected changes in asset values resulting from interest rate risk. In the current environment, many investors have also faced unanticipated losses resulting from liquidity risk; as investors tried to sell assets into an illiquid market, they were forced to accept a heavily discounted price to do so. Even investors not planning to sell their assets have been affected by the illiquidity, as accounting and other rules may require them to mark-down the value of their assets to the observed market price.

Regardless of the source of need, capital adequacy has become a key consideration for the secondary mortgage market. Such adequacy is generally measured by two groups, investors and regulators. Capital adequacy is keenly dependent on the assessment of risks outlined above. The greater the risks, as assessed, the greater the capital needed. In times of rapid market deterioration, when model and risk assumptions change dramatically, capital needs may change dramatically as well.

Under-capitalization can affect the entire value chain of mortgage assets. If market participants that have taken on certain risks become undercapitalized, they may not be able to absorb those risks when necessary — forcing others to absorb them. Capital concerns thus elevate counterparty risk as a concern for all parties in a chain of transactions.

Given different models, different regulators have often come up with different capital adequacy requirements. Such differences affect the costs of funds for the affected parties and can put some mortgage investors at an advantage, or disadvantage, to others.

Controlling fraud between parties in the system

Given the size and scope of the mortgage market, there is potential for market participants to perpetrate fraud against other participants. Some of the most common types of mortgage fraud include fraud in loan applications, in tax and financial statements, in verification of deposits, in appraisals and property valuations, in the verification of employment, in escrow and closing documents and in credit reports. Fraud can also extend to the creation and sale of complex mortgage investment vehicles.

Regardless of the intent or scale of the infraction, fraud increases risks and costs throughout the system.

A key consideration for an effective secondary mortgage market is the degree to which the market minimizes fraud. Key considerations also include the ability to identify and prosecute fraud, and the degree to which fraud is deterred. Information sharing among primary market participants and with law enforcement agencies is a critical component as well.

Transparency

In order to attract investors, another key consideration for a secondary mortgage market is its transparency. The less transparent a market is, the more poorly understood it will be by investors, and the higher will be the yield those investors demand to compensate for the uncertainty.

In the mortgage market, transparency means being able to see through from the investment vehicle to the credit and interest rate risks of the loan or loans underlying the asset. It means being able to analyze the characteristics of the borrower, the property and any other collateral or support the loan may have. It means being able to understand and model the structure of cash flows and repayment priorities, and to do so across pools of loans or securities when appropriate. Often transparency means lots of data in a complex, structured and dynamic system.

Transparency also means understanding how mortgage-related assets react to different events. As the complexity of structured products has advanced, the ability of market participants to understand and model them has been tested. To the degree some market participants have an ability to understand and model mortgage assets that others do not, the asymmetry of information gives the former participants an advantage over the latter.

Simplifying the range of mortgage offerings adds some level of transparency, to the degree that mortgages are structured in a similar way and/or have certain features in common. The **To-Be-Announced (TBA)** market, through which investors are able to buy mortgage bonds backed by Ginnie Mae, Freddie Mac and Fannie Mae before the actual security is created, is an example of such standardization. In order to be TBA-eligible, loans and pools must fit a predefined set of parameters.

Another consideration in transparency relates to changes in the operations of the market. Built into investors' risk models is an expectation of how the market operates, for example how foreclosures occur, how a servicer advances payments or how much capital must be reserved for different loan products. To the degree these operating assumptions change, the market becomes less transparent to participants and investors either turn away, or increase the yields they demand.

Accounting rules and regulations are intended to provide greater transparency. In certain instances, however, the creation and interpretation of accounting standards has been seen to have diminished, rather than improved, transparency. Many argue that mark-to-market accounting, in which certain firms must regularly value assets at the going market price and book to their earnings any gains or losses in those values, is the most recent example. Accounting rules also affect how firms report the sale of mortgages and mortgage-related assets ("True-sale treatment"). In some instances, these rules have clouded the transparency of who holds certain assets, the risks associated with them and the capital required to adequately support them. Rules that affect the ways in which firms account for the sale of mortgages and structured securities and how they mark their assets to market will have a profound impact on the shape that a future secondary market can take.

Means of attracting a broad array of investors

The secondary mortgage market has attracted a broad array of investors in recent years, including mortgage professionals steeped in the intricacies of the mortgage market as well as mid-tier and smaller investors with only a passing knowledge of mortgages or mortgage securities. The investment banks, rating agencies, the GSEs, and others have been key players in making mortgage assets accessible investments. Their activities have included establishing a level of confidence, standardizing risk assessment and guaranteeing the credit performance of investments.

A key consideration for future markets is how to again attract all levels of investors, including these mid-tier and smaller investors, whether through transforming credit and interest rate risk into counterparty risk, providing credible third-party assessments of risks or some other means.

Lender/liquidity of last resort

Even an effective secondary mortgage market will occasionally meet with periods of illiquidity. During such times, it has proven beneficial to have a "lender of last resort" that is willing to step in and absorb the cost of the illiquidity of certain assets. Having such a lender provides investors with greater comfort during liquid as well as illiquid periods, thus reducing the yields investors demand in good times and bad.

A lender of last resort faces challenges of differentiating issues of illiquidity from fundamental issues of credit; for example, if an asset's yield jumps because of a change in the fundamental performance of that asset, versus a jump because of a temporary lack of potential buyers.

The lender of last resort also faces the challenge of maintaining its capabilities during periods of liquidity, when it is not needed. If such a lender is not operating in the market during periods of normal market conditions, the time and resources needed to build an effective staff and infrastructure may mean it is not immediately available when needed.

Overlay of social policy goals

The importance of housing to the social and economic lives of Americans means that discussions of the secondary market often include an overlay of questions of how best to achieve social policy goals, such as serving underserved markets and providing affordable housing. The GSEs' implied federal guarantee, as well as their affordable housing goals and conforming loan limits are prime examples. By definition, the pursuit of such social objectives through secondary market activities, as opposed to explicit and targeted subsidies, distorts the market — promoting investment in some products and deterring it among others. The use of the secondary market for social policy objectives may also transfer risks from market participants, who would price and distribute the risks based on a competitive bidding process, to the government, which may socialize the risks based on its own internal assessments.

Transition

The secondary mortgage market is in an extremely fragile state. A key consideration for any actions regarding its future will be how to transition from the market's current state, to its desired state. The size of the market, and the depth of its infrastructure, will make any such transition a significant challenge.

SECTION IV: MENU OF SECONDARY MARKET MODELS

A key question in the policy debate about the future of the secondary mortgage markets and the GSEs is how the market will provide the investment options detailed in Section II of this paper. What follows is a brief discussion of selected models that could serve as alternatives for the potential redesign of the GSEs, and the types of investment products they would bring to the market. The models will determine the investment vehicles available, which in turn will determine the degree to which capital is attracted back to the real estate finance markets.

The list of potential models is by no means exhaustive and is not a recommendation of any one or more models. Rather, it is presented to help readers understand some of the types of options that may be available, and the various criteria and questions that must be considered for each. At any one time, multiple models may be required to augment the private markets in order to attract the breadth and depth of investors needed to fund the U.S. housing market.

Chart 1. High-level Menu of GSE-like Models

	Fully privatized	Covered bond	Hybrid covered bond	Co-op	Open charter	Limited charter	Improved GSE	Utility	FHA-Ginne-Type
Private Ownership	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Government guarantee	No	No	No	Govt backstop	Insurance fund	Insurance fund	Govt backstop	Govt backstop	Explicit
Regulator	Bank/other regulators	Bank regulators	Bank regulators	FHFA-type	FDIC-type	FHFA-type	FHFA	FHFA-type	n.a.
Required portfolio	Market-driven	Yes	Yes	*de minimus*	*de minimus*	*de minimus*	Safety & soundness	*de minimus*	No
Investment vehicles brought to market									
Whole loans	Yes	No	No	No	No	No	No	No	No
Pass-thru MBS	Yes	No	No	Backstop	Govt	Govt	Backstop	Backstop	Govt
Structured MBS	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
(Re-)REMIC/CDO	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
Mortgage REIT	Yes	No	No	No	No	No	No	No	No
Corporate debt	Yes	No	No	n.a.	n.a.	n.a.	Yes	n.a.	n.a.
Secured debt	Yes	Yes	Yes	n.a.	n.a.	n.a.	No	n.a.	n.a.
Shareholder equity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

Fully Privatized Market

- Institutions hold whole loans, pool loans into securities and covered bonds and use other vehicles to allow investors and other financial institutions to invest in mortgage-related assets.
- Any guarantees within the system would be entirely private, with no explicit or implicit government backing.
- Underwriting, pricing, and policies on residual guarantees of originators as well as representations, warrants and repurchase requirements would be determined solely by market participants and based on market-determined standards.
- Capital supporting the market would come from private investors, loan aggregators, bank holding companies and other financial institutions.
- No special charter would be required other than the normal corporate, bank holding company or other financial institution charter.
- The market would be overseen by the existing regulators for the corporation or bank holding company and other market participants.
- Potential investment vehicles brought to market:
  + Whole loans
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Mortgage REIT
  + Corporate debt
  + Secured debt/covered bonds
  + Shareholder equity

Covered Bonds

- Large commercial banks and other institutions would issue covered bonds as a form of marketable, collateralized deposits.
- Guarantees within the system would remain private, with no explicit or implicit government backing for the covered bonds.
- Underwriting, pricing, and policies on residual guarantees of originators as well as representations, warrants and repurchase requirements would be determined solely by market participants and based on market-determined standards.
- The institutions would set their own delivery and pricing criteria, and would essentially act as correspondent originators along with their own retail and/or broker networks.
- Safety and soundness guidelines would be set by the bank regulators.
- Potential investment vehicles brought to market:
  + Secured debt/covered bonds
  + Shareholder equity

Hybrid Covered Bonds

- Similar to the system above, except the banks would only be allowed to issue covered bonds backed by the securities issued by whatever a new government-related securitization entity turns out to be. For example, if something close to the current GSE model were adopted, covered bonds would essentially replace the portfolios of the GSEs.
- The banks and other institutions issuing the bonds would bear the interest rate risk associated with option-embedded mortgage-backed securities.
- Given the various layers of capital and guarantees associated with the securities, capital requirements would be set at appropriately low levels by the banking regulators.
- Potential investment vehicles brought to market:
  + Secured debt/covered bonds
  + Shareholder equity

Co-op Model

- The industry would operate one or more cooperatives that would pool mortgages from member firms.
- Similar to the Mortgage Purchase Program (MPP) offered by some Federal Home Loan Banks, originators would pay in capital based on the volume of mortgages submitted. The originators would also post as collateral a portion of the loan-sale proceeds to cover some initial level of losses. The collateral would be refundable as the loans age and rights to the collateral could be sold to third parties.
- The co-op would determine pricing, credit standards and eligibility requirements.
- The co-op would be subject to safety and soundness review by the federal government. The co-op members would not cross-guarantee each other's losses beyond their equity investments. The government would bear the risk of catastrophic losses beyond the capital and the pledged accounts.
- The co-op would not hold a portfolio beyond de minimis levels for operating and securitization purposes.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Shareholder equity

Open Charter Model

- A new type of financial charter would be created expressly for loan aggregators and securities-issuers.
- An FDIC-like insurance would be established to provide the Federal guarantee of the mortgage securities. It would be funded by an insurance premium on each security issued and the insurance premiums would be risk-adjusted based on the risk of the entity and the risk of the underlying mortgages.

- An FDIC-like entity would be established to grant charters and set safety and soundness standards and capital requirements.
- The individual chartered entities would set their own pricing and delivery guidelines, as well as representations, warrants and repurchase requirements, subject to safety and soundness guidelines of the regulator.
- Chartering would be open and the entities could be independent or subsidiaries of bank holding companies or other financial institutions. Firewalls could be established to prevent cross-guarantees between insured deposits and the credit guarantees on mortgage securities.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Shareholder equity

Limited Charter Model

- Similar to the Open Charter Model except that the number of charters would be limited by the regulator's view of how many charters were needed to maintain competitiveness and serve all aspects of the market, rather than by how many qualified applications were received.
- The government guarantee of mortgage-backed securities issued by the institutions would be provided by an FDIC-like insurance fund that would be funded by a deposit insurance premium on each security issued.
- The insurance premiums would be risk-adjusted based on the risk of the entity and the risk of the underlying mortgages.
- While the regulatory agency would not directly control pricing, it would determine whether there were an adequate number of competitors to ensure that there was sufficient competition to have market-driven pricing.
- Charters, since they would be limited, would not be available as subsidiaries to financial institutions. In that sense, very much like the current GSE model.

- An FHFA-like entity would oversee safety and soundness and set minimum capital standards.
- The entities would not be allowed to hold portfolios beyond de mimimis amounts.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Shareholder equity

Improved Current GSE Model

- Similar to the current GSE model, but with implementation of stronger credit controls and higher capital requirements.
- Portfolio restrictions would expand and contract based upon safety and soundness considerations and the regulator's view of the degree of support needed for the MBS market.
- The regulator would have oversight authority for pricing policies and target returns on equity.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Corporate debt
  + Shareholder equity

Utility Model

- A single entity with a federal charter but with private ownership.
- The utility charter would not be part of any other financial institution.
- Delivery guidelines, seller/servicer eligibility and requirements, as well as requirements for representations, warrants and repurchase requirements would be subject to review by the regulator and the pricing guidelines and other requirements would be transparent.

- Pricing and risk exposure would be subject to regulatory review, with utility-type targets on returns on equity.
- The utility would not be allowed to hold a portfolio beyond a de mimimis amount needed for transaction support and problem loan workout.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS
  + (Re-)REMIC/CDO
  + Shareholder equity

FHA/Ginnie Mae-Type Model

- Similar to the utility model except that the utility would be an agency of the government.
- The agency would not buy individual loans but would securitize packages of mortgages submitted for securitization.
- An FHA-like reserve fund would be established to provide the explicit support for the securities.
- The agency would establish, through the rulemaking process, pricing, counterparty and credit guidelines.
- Potential investment vehicles brought to market:
  + Pass-through MBS
  + Structured MBS

GLOSSARY OF SELECTED TERMS

Term	Definition
adjustable rate mortgage (ARM)	A mortgage loan or deed of trust which allows the lender to adjust the interest rate in accordance with a specified index periodically and as agreed to at the inception of the loan. Also called "variable rate mortgages" (VRM).
amortization	Repayment of a mortgage debt with periodic payments of both principal and interest, calculated to retire the obligation at the end of a fixed period of time.
asset	A property or right owned, tangible or intangible, that has monetary value and is capable of providing future benefits to its owner.
balloon mortgage	A mortgage with periodic installments of principal and interest that do not fully amortize the loan. The balance of the mortgage is due in a lump sum at a specified date, usually at the end of the term.
bankruptcy	Court proceedings to relieve the debts of an individual or business unable to pay its creditors. An individual, firm, or corporation who, through a court proceeding, is relieved from the payment of all debts. Bankruptcy may be declared under one of several chapters of the federal bankruptcy code.
basis point	One one-hundredth of one percent. Used primarily to describe changes in yield or price on debt instruments, including mortgages and mortgage-backed securities.
bond	An obligation written under seal. For example, the obligation may be to make good if a third party defaults (performance bond), or betrays a trust (fidelity bond), or an obligation to pay interest and principal as specified. The latter type of bond is a debt instrument which may be secured by a mortgage or a pool of mortgages.
borrower	One who receives funds in the form of a loan with the obligation of repaying the loan in full with interest.
call option	A contract granting the right, but not the obligation, to purchase a security at a specified strike price on a particular date.
capital	The net worth of a business represented by the amount that its assets exceed liabilities. Money invested to create income.
capital market	The financial market for buying and selling long-term investments (those with maturities of greater than one year), such as mortgages, Treasury bonds, and certificates of deposit.
collateral	Property pledged as security for a debt, for example, mortgaged real estate.
commercial real estate	Office buildings, shopping centers, apartment buildings and other property which is utilized for the production of income rather than as residences. If residential real estate has more than four units it is considered commercial real estate.
conduit	An entity which issues mortgage-backed securities backed by mortgages which were originated by other lenders.

core capital	One of the components of risk-based capital guidelines which includes common stockholders equity, retained earnings, noncumulative preferred stock, and minority interests in equity accounts of consolidated subsidiaries.
counterparty risk	The risk that a counterparty in a transaction will not fulfill its obligations.
coupon rate	Annual interest rate on a debt. The coupon rate on a mortgage is the contract rate stated in the mortgage note. The coupon rate on a mortgage security is the rate stated on the face of the security, not the rate of the mortgages in the pool backing the security.
credit	Financial status-ability of borrowers to meet the terms of their obligations.
credit rating	A rating given to a person or company that establishes creditworthiness based upon present financial condition, experience, and past credit history.
debt service coverage ratio	A ratio of effective annual net income to annual principal and interest payments. Also called debt service coverage.
debt service	A borrower's periodic mortgage payments comprised of principal and/or interest on the unpaid mortgage balance.
default	The non-payment of a mortgage or other loan in accordance with the terms as specified in the note.
derivatives	Investments whose returns derive from the change in value of other securities or indexes, such as bonds, interest rates or stocks.
duration	An estimate of the volatility or sensitivity of the market price of a bond to changes in interest rates; it measures the weighted average time until cash flow repayment.
exposure	The total amount a lender has tied up in a loan. Usually the outstanding principal balance of the loan plus accrued interest, and any capitalized costs including legal fees and expenses, appraisal and environmental fees, and all other costs associated with securing the lender's interest in the property.
Fannie Mae (FNMA)	The nation's largest mortgage investor created in 1968 by an amendment to Title III of the National Housing Act (12 USC 1716 et seq.) this stockholder-owner corporation, a portion of whose board of directors is appointed by the President of the United States, supports the secondary market in mortgages on residential property with mortgage purchase and securitization programs.
Fannie Mae DUS Lender	A lender designated by Fannie Mae who originates, underwrites, closes, and services Fannie Mae approved multifamily mortgage loans. DUS stands for "Delegated Underwriting and Servicing."
Federal Deposit Insurance Corporation (FDIC)	Originally established by the Banking Act of 1933 to protect depositors from loss. As a result of the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), the FDIC administers the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF).
Federal Housing Administration (FHA)	A federal agency within the Department of Housing and Urban Development (HUD) that provides mortgage insurance for residential mortgages and sets standards for construction and underwriting. The FHA does not lend money, nor does it plan or construct housing.

Federal Housing Finance Administration (FHFA)	On July 30, 2008, President Bush signed the Housing and Economic Recovery Act of 2008 (HERA), which created the Federal Housing Finance Agency (FHFA). FHFA was created to combine the Federal Housing Finance Board (FHFB), the Office of Federal Housing Enterprise Oversight (OFHEO) and the Department of Housing and Urban Development's (HUD's) mission group as a single regulator for Fannie Mae, Freddie Mac, the 12 Federal Home Loan Banks (FHLBanks) and the Office of Finance (OF).
Financial Accounting Standards Board (FASB)	A private entity created by the accounting profession to develop and promulgate financial accounting standards and practices. Its membership is composed of top-level accounting professionals from business, government, and education professions. It derives its authority from official recognition by the Securities and Exchange Commission (SEC) and the American Institute of Certified Public Accountants (AICPA), and from the general support of corporate and investment communities. While the Securities and Exchange Commission (SEC) has the authority to regulate accounting standards, it nearly always defers to the FASB.
first mortgage	A mortgage that gives the mortgagee a security right over all other mortgages of the mortgaged property.
fixed-rate mortgage (FRM)	A mortgage in which the interest rate and payments remain the same for the life of the loan.
foreclosure	A legal procedure in which a mortgaged property is sold in a legal process to pay the outstanding debt in case of default.
Freddie Mac (Federal Home Loan Mortgage Corporation)	Created by Congress in Title III of the Emergency Home Finance Act of 1970 (12 USC 1451 et seq.). This stockholder-owned corporation, a portion of whose board of directors is appointed by the President of the United States, supports the secondary market in mortgages on residential and multifamily properties with mortgage purchase and securitization programs.
generally accepted accounting principles (GAAP)	Accounting practices mandated by recognized rule-making authorities.
Ginnie Mae	Created in 1968 by an amendment to Title III of the National Housing Act (12 USC 1716 et seq.), this federal government corporation is a constituent part of the Department of Housing and Urban Development. Among other governmental functions, it guarantees securities backed by mortgages that are insured or guaranteed by other government agencies. Also called Government National Mortgage Association (GNMA).
government sponsored enterprise (GSE)	Private organizations with government charters and backing. Examples are Freddie Mac and Fannie Mae.
guarantee	An individual's or entity's promise to pay in the event of an operational shortfall.
guarantor	A party who is secondarily liable for another's debt or performance (in contrast to a surety who is primarily liable with the principal debtor).
guaranty fee	Price for guaranteeing to an investor the timely payment of principal and interest from all the mortgages underlying a mortgage backed security.
hedging	A marketing strategy that reduces or transfers risk of loss from changes in market interest rate.

home loan	A mortgage loan secured by a residence for one, two, three or four families. Also known as a single family mortgage, even though the property may be designed for more than one family.
interest	Consideration in the form of money paid for the use of money, usually expressed as an annual percentage. Also, a right, share, or title in property.
interest rate	Percentage paid for the use of money, usually expressed as an annual percentage.
issuer	One who packages mortgages for sale as securities.
lender	Person or entity that invests in or originates mortgage loans, such as a mortgage banker, credit union, commercial bank, or savings and loan. In single-family property usage, the lender is generally whosever name the loan is closed in. (In a table funding transaction, the whole-saler mortgage company is usually considered to be the "lender.") In commercial property usage, the lender is the life insurance company, bank or pension fund that provides the funds and in whose name the loan is closed.
leverage	The use of borrowed money to increase the return on investment. For leverage to be positive, the rate of return on the investment must be higher than the cost of the money borrowed.
lien	A legal hold or claim of a creditor on the property of another as security for a debt. Liens may be against real or personal property.
liquidity	The ability to readily convert assets or investments to cash.
loan-to-value ratio (LTV)	The ratio of the amount of the loan to the appraised value or sales price of real property (expressed as a percentage).
loss given default	The proportion of the exposure at the time of default that will be lost if a default occurs.
mark to market	The process whereby the book value or collateral value of the security is adjusted to reflect current market value.
modified pass-through	Type of mortgage backed security (MBS) that requires the issuer to pay, on a timely basis, all principal and interest due to investors, regardless of whether the payments have been received from borrowers.
moral hazard	The danger that market participants will promote greater risks if they are insulated from those risks than they otherwise would.
Mortgage	A pledge of property, usually real property, as security for a debt. By extension, the document evidencing the pledge. In many states this document is a deed of trust. The document may contain the terms of repayment of the debt. By further extension, "mortgage" may be used to describe both the mortgage proper and the separate promissory note evidencing the debt and providing the terms of the debt's repayment.
mortgage-backed security (MBS)	An investment instrument backed by mortgage loans as security. Ownership is evidenced by an undivided interest in a pool of mortgages or trust deeds. Income from the underlying mortgages is used to pay interest and principal on the securities.
mortgage banker	An individual, firm or corporation that originates, sells and/or services loans secured by mortgages on real property.

mortgage bond	Bonds secured by mortgages.
mortgage insurance (MI)	Insurance which protects mortgage lenders against loss in the event of default by the borrower. This allows lenders to make loans with lower down payments. The federal government offers MI through HUD/FHA; private entities offer MI for conventional loans.
mortgage note	A written promise to pay a sum of money at a stated interest rate during a specified term. A mortgage note is secured by a mortgage.
mortgage pool	A group of mortgage loans with similar characteristics that are combined to form mortgage-backed securities.
mortgage portfolio	The aggregate of mortgage loans held by an investor or serviced by a mortgage banker.
mortgage servicing rights	The contractual obligations undertaken by one party to provide servicing for mortgage loans owned by another party, typically for a fee.
mortgagee	The lender in a mortgage transaction.
mortgagor	The borrower in a mortgage transaction who pledges property as a security for a debt.
multifamily housing	A building with more than four residential units.
negative amortization	The unpaid interest which is added to the mortgage principal in a loan where the principal balance increases rather than decreases because the mortgage payments do not cover the full amount of interest due.
note	A general term for any kind of paper or document signed by a borrower that is an acknowledgment of the debt, and is, by inference, a promise to pay. When the note is secured by a mortgage, it is called a mortgage note and the mortgagee is named as the payee.
Office of Thrift Supervision (OTS)	The successor thrift regulator to the Federal Home Loan Bank Board and a division within the Treasury Department. The OTS is responsible for the examination and regulation of federally chartered and state chartered savings associations.
option	A contract granting a right to purchase, sell, or otherwise contract for the use of a property at a stated price within a stated period of time. In secondary marketing, an instrument used to hedge marketing risk. Examples are over-the-counter mortgage options, or Treasury bond futures options.
optionality	The ability to exercise an option.
pass-through	A security in which principal, interest, and prepayments are passed through to investors of the security each month, as received. Mortgage collateral is held by a grantor trust in which investors own an undivided interest. In accounting terms, a pass-through is treated as a sale of assets.
pay-through bond	A type of mortgage-backed security that is a general obligation of the issuer, and is secured by mortgage collateral. Like a pass-through, cash flow from the mortgage collateral is passed through to investors, however, a pay-through is a debt offering and not a sale of assets.
pool	A collection of mortgage loans grouped by one or more similar characteristics.

portfolio	The collection of loans held for servicing or investment.
portfolio lender	A lender who holds loans in their portfolio and does not sell to investors in the secondary market. The lender usually holds these loans until maturity or until the loan is paid off.
prepayment	The payment of all or part of a mortgage debt before it is due.
prepayment restriction	A restriction on or charge the mortgagor pays the mortgagee for the privilege to prepay the loan.
prepayment speed	The speed at which mortgage borrowers prepay their mortgages.
primary market	The market in which mortgages are created and funds are loaned directly to borrowers.
private mortgage insurance (PMI)	Insurance written by a private company protecting the mortgage lender against financial loss occasioned by a borrower defaulting on the mortgage.
probability of default	The likelihood that a loan will not be repaid and will fall into default.
put option	A contract granting the right, but not the obligation, to sell the underlying security at a specified price (the strike price) at any time prior to the expiration date. See CALL OPTION.
real estate investment trust (REIT)	An investment vehicle where title to real estate assets is held and managed by one or more trustees who control acquisitions and investments much like a mutual fund.
Real Estate Mortgage Investment Conduit (REMIC)	A vehicle for issuing multiclass mortgage-backed securities which allows the issuer to treat the security as a sale of assets for tax and accounting purposes.
regulatory agency	An arm of the state or federal government that has the responsibility to license, pass laws, regulate, audit, and monitor industry related issues.
reinsurance	The practice of one insurance company (the reinsurer) accepting risks or business from another insurer (the ceding company). It allows insurers to maintain a larger spread of risk and avoid large catastrophes.
repurchase agreement	An agreement between a buyer and seller of securities whereby the seller agrees to buy back the securities at a specified future date and price.
reserves	Funded or non-funded accounts set up at either the property or portfolio level in anticipation of periodic or non-periodic capital expenditures or cash needs.
Resolution Trust Corporation (RTC)	A government agency responsible for managing and resolving the affairs of insolvent savings and loan associations placed into receivership by the FDIC. This includes the liquidation, operation, and sale of thrift institutions and thrift assets.
risk-based capital regulations	Rules established by financial regulators which dictate how much of certain types of capital a financial institution may hold.
risk/reward ratio	The relationship between risks of investment and the anticipated rewards for undertaking that risk.
seasoned mortgage	A mortgage on which payments have been made regularly for a year or longer.

second mortgage	A mortgage that has rights subordinate to a first mortgage. Also called "second trust."
secondary mortgage market	The market where lenders and investors buy and sell existing mortgages or mortgage-backed securities, thereby providing greater availability of funds for additional mortgage lending.
Securities and Exchange Commission (SEC)	A governing body that regulates the sale and registration of securities. The SEC protects investors and the general public against fraud and malpractice in financial markets.
securitization	The process of pooling loans into mortgage-backed securities for sale into the secondary mortgage market.
seller-servicer	A term used by Fannie Mae and Freddie Mac for a mortgage banker or other entity that has met the requirements necessary to sell and service mortgages for Fannie Mae or Freddie Mac.
servicing fee/servicing rate	The fee earned by a servicer for administering a loan for an investor usually expressed as a percentage of the unpaid principal balance of the loan and deducted from the monthly mortgage payment.
spread	The difference between the rate at which money can be borrowed and the rate at which it is loaned. Also, the difference between the ask and bid prices on a security.
stripped mortgage-backed security	A security formed by segregating principal from interest to make separate interest only and principal only mortgage-backed securities.
term	The period of time between the commencement date and termination date of a note, mortgage, legal document, or other contract.
to-be-announced (TBA) market	A forward market in which pass-through securities issued by Freddie Mac, Fannie Mae and Ginnie Mae trade. The market is a forward market because the trade occurs prior to the creation of the actual mortgage-backed security that will be delivered.
tranche	A level or class of investment interest in a CMO or REMIC, differentiated by maturity, interest rate, and/or accrual structure.
underwriting	In mortgage banking, the analysis of the risk involved in making a mortgage loan to determine whether the risk is acceptable to the lender. Underwriting involves the evaluation of the property as outlined in the appraisal report, and of the borrower's ability and willingness to repay the loan.
volatility	The sensitivity of a security's price to changes in the overall market. Also, interest rate fluctuations resulting from an unstable market.
whole loans	Unsecured mortgages sold individually to investors.
yield	The ratio of investment income to the total amount invested over a given period of time.
yield curve	A graphic representation of market yield for a fixed income security plotted against the maturity of the security.

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