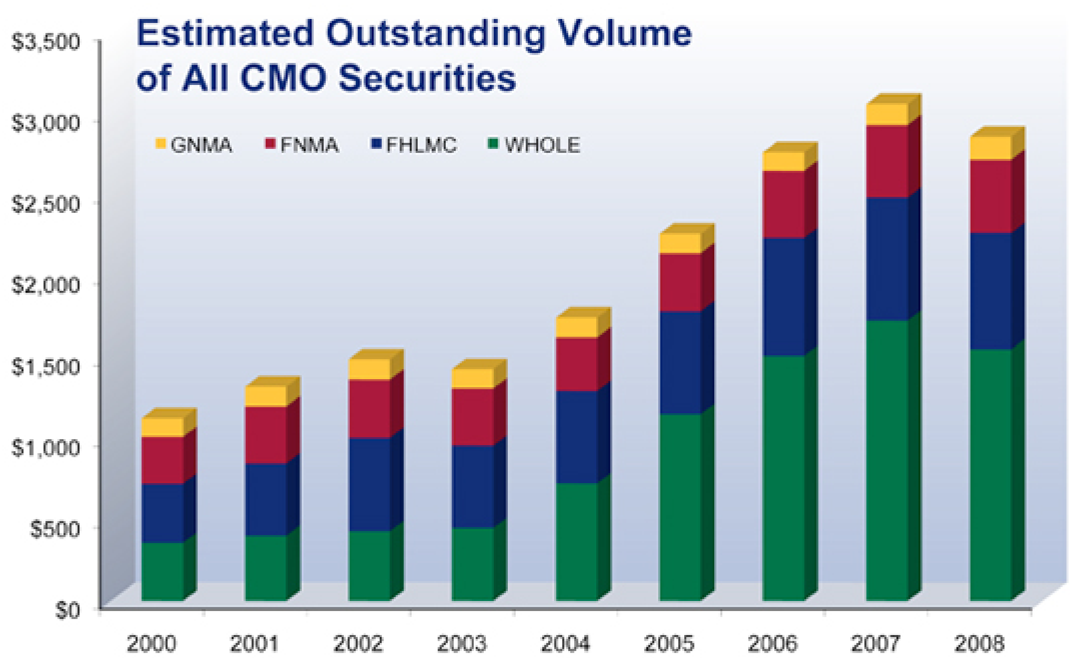
THE CMO: AN OVERVIEW

Collateralized Mortgage Obligations (CMOs) — also known as Real Estate Mortgage Investment Conduits (REMICs) — are one of the most innovative investment vehicles available today, offering regular payments, relative safety, and notable yield advantages over other fixed-income securities of comparable credit quality.

By the end of December 2008 the total volume of outstanding securities came to nearly $2.8 trillion. A wide variety of CMO securities with different cash flow and expected maturity characteristics have been designed to meet specific investment objectives. While CMOs offer advantages to investors, they also carry certain risks, which are explained on this page. To determine if CMOs have a place in your portfolio, you should first understand the distinctive features of these securities.



Source: Bloomberg 1/21/2009. Figures are in billions of dollars.

THE BUILDING BLOCKS OF CMOs: MORTGAGE LOANS & MORTGAGE PASS-THROUGHS

The creation of a CMO begins with a mortgage loan extended by a financial institution to finance a borrower's home or other real estate. The homeowner usually pays the mortgage loan in monthly installments composed of both interest and “principal.” Over the life of the mortgage loan, the interest component of payments, which typically comprises a majority of the payments in the early years, gradually declines as the principal component increases.

To obtain funds to make more loans, mortgage lenders either “pool” groups of loans with similar characteristics to create securities or sell the loans to issuers of mortgage securities. The securities most commonly created from pools of mortgage loans are “mortgage pass-through securities,” often referred to as mortgage-backed securities (MBS) or participation certificates (PCs). Mortgage pass-through securities represent a direct ownership interest in a pool of mortgage loans. As the homeowners whose loans are in the pool make their mortgage loan payments, the money is distributed on a pro rata basis to the holders of the securities.

Several factors can affect the homeowners’ payments. Typically, the homeowner will “prepay” the mortgage loan by selling the property, refinancing the mortgage, or otherwise paying off the loan in part or whole. Most mortgage pass-through securities are based on fixed-rate mortgage loans with an original maturity of 30 years. But experience shows that most of these mortgage loans will be paid off much earlier.

While the creation of mortgage pass-through securities greatly increased the secondary market for mortgage loans by pooling them and selling interests in the pool, the structure of such securities has inherent limitations. Mortgage pass-through securities only appeal to investors with a certain investment horizon — on average, 10 to 12 years.

CMOs were developed to offer investors a wider range of investment time frames and greater cash-flow certainty than had previously been available with mortgage pass-through securities. The CMO issuer assembles a package of these mortgage pass-through securities, or in some cases mortgage loans themselves, and uses them as collateral for a multi-class security offering. The different classes of securities in a CMO offering are known as “tranches,” from the French word for “slice.” The CMO structure enables the issuer to direct the principal and interest cash flow generated by the collateral to the different tranches in a prescribed manner, as defined in the offering’s prospectus, to meet different investment objectives.

THE HIGH CREDIT QUALITY OF CMOs

Most mortgage pass-through securities are guaranteed by the Government National Mortgage Association (GNMA or Ginnie Mae), an agency of the U.S. government, or by U.S. government-sponsored enterprises (GSE) such as the Federal National Mortgage Association (FNMA or Fannie Mae) or the Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac). Ginnie Mae is a government-owned corporation within the Department of Housing and Urban Development. Fannie Mae and Freddie Mac have federal charters and are subject to some oversight by the federal government but are publicly owned by their stockholders. (The term “agency” is commonly used to refer to Fannie Mae and Freddie Mac as well as to GNMA. This discussion follows that usage, but readers should bear in mind that Fannie Mae and Freddie Mac are federally chartered and privately owned companies).

Some private institutions such as subsidiaries of investment banks, financial institutions, and home builders, also issue mortgage securities. When issuing CMOs, they often use agency mortgage pass-through securities as collateral, however, their collateral may also include different or specialized types of mortgage loans or mortgage loan pools, letters of credit, or other types of credit enhancements. These so-called “private label” CMOs are the sole obligation of their issuer. To the extent that private-label CMOs use agency mortgage pass-through securities as collateral, their agency collateral carries the respective agency’s guarantees. Private-label CMOs are assigned credit ratings by independent credit agencies based on their structure, issuer, collateral, and any guarantees or outside factors. Many carry the highest AAA credit rating.

As an additional investor protection, the CMO issuer typically segregates the CMO collateral or deposits it in the care of a “trustee” who holds it for the exclusive benefit of the CMO bond holders.

A DIFFERENT SORT OF BOND: PREPAYMENT RATES AND AVERAGE LIVES

Although CMOs entitle investors to payments of principal and interest, they differ from corporate bonds and Treasury securities in significant ways. Corporate and Treasury bonds are issued with stated maturities. The purchase of a bond from an issuer is essentially a loan to the issuer in the amount of the principal, or face amount, of the bond for a prescribed period of time in return for a specified annual rate of interest. The bondholder receives interest, generally in semiannual payments, until the bond is redeemed. When the bond matures or is called by the issuer, the issuer returns the “face value” of the bond to the investor in a single principal payment.

With a CMO, the ultimate borrower is the homeowner who takes on a mortgage loan. Because the homeowner’s monthly payments include both interest and principal, the mortgage security investor’s principal is returned over the life of the security, or “amortized,” rather than repaid in a single lump sum at maturity. CMOs provide monthly or quarterly payments to investors which include varying amounts of both principal and interest. As the principal is repaid or prepaid, interest payments become smaller because they are based on a lower amount of outstanding principal.

A mortgage security “matures” when the investor receives the final principal payment. Most CMO tranches have a stated maturity based on the last date on which the principal from the collateral could be paid in full. This date is theoretical because it assumes no prepayments on the underlying mortgage loans.

Mortgage securities are more often discussed in terms of their “average life” rather than their stated maturity date. Technically, the average life is defined as the average time to receipt of each dollar of principal, weighted by the amount of each principal payment. In simpler terms, the average life is the average time that each principal dollar in the pool is expected to be outstanding based on certain assumptions about prepayment speeds. If prepayment speeds are faster than expected, the average life of the CMO will be shorter than the original estimate; if prepayment speeds are slower, the CMO’s average life will be extended.

While some CMO tranches are specifically designed to minimize the effects of variable prepayment rates, the average life of the security is always a best estimate, contingent on how closely the actual prepayment speeds of the underlying mortgage loans match the assumptions.

CALCULATING PREPAYMENT SPEEDS

Prepayment assumptions, that is, estimates based on historic prepayment rates for each particular type of mortgage loan under various economic conditions from various geographic areas, are factored into the offering price, "yield," and market value of a CMO. The realization of the average life and yield estimates depends on the accuracy of the prepayment assumptions. Different standard and proprietary prepayment rate models exist, but one of the most common ways of expressing prepayment rates is in terms of the Standard Prepayment Model of The Bond Market Association.

Developed in 1985 for specific application to mortgage securities, the Association's Model assumes that new mortgage loans are less likely to be prepaid than somewhat older, more "seasoned" mortgage loans. Projected and historical prepayment rates are often expressed as "percentage of PSA" (Prepayment Speed Assumptions).

INTEREST RATES AND YIELDS ON CMOs

The interest rates paid on CMOs will be lower than the interest rates paid on the underlying mortgage loans because the issuer retains a portion of the interest paid by the mortgage borrower as a "servicing fee" for creating the security and for collecting and distributing the monthly payments to investors. Still, newly issued mortgage securities carry higher estimated yields than comparable Treasury securities.

In part, this is because the interest rates paid by home buyers are higher than the interest rates paid by the U.S. government. However, the higher interest rates on mortgage securities also reflect compensation for the uncertainty of their average lives.

As with any bond, the yield on a CMO depends on the purchase price in relation to the interest rate and the length of time the investor's principal remains outstanding. CMO yields are often quoted in relation to yields on Treasury securities with maturities closest to the CMO's estimated average life. The estimated yield on a CMO reflects its estimated average life based on the assumed prepayment rates for the underlying mortgage loans. If actual prepayment rates are faster or slower than anticipated, the investor who holds the CMO until it is fully paid may realize a different yield. For securities purchased at a discount to face value, faster prepayment rates will increase the yield-to-maturity, while slower prepayment rates will reduce it. For securities purchased at a premium, faster prepayment rates will reduce the yield-to-maturity, while slower rates will increase it. For securities purchased at face value ("par"), these effects should be minimal.

Because CMOs pay monthly or quarterly as opposed to the semiannual interest payment schedule for most bonds, CMO investors can use their interest income much earlier than other bond investors. Therefore, CMOs are often discussed in terms of their "bond equivalent yield," which is the actual CMO yield adjusted to account for its greater present value resulting from more frequent interest payments.

THE EFFECT OF INTEREST RATES ON CMO VALUES AND PREPAYMENT RATES

Prevailing market interest rates affect CMOs in two major ways. First, as with any bond, when interest rates rise, the market price or value of most types of outstanding CMO tranches drops in proportion to the time remaining to the estimated maturity. Conversely, when rates fall, prices of outstanding CMOs generally rise, creating the opportunity for capital appreciation if the CMO is sold prior to the time when the principal is fully repaid.

Movements in market interest rates have a greater effect on CMOs than on other fixed-interest obligations because rate movements affect the underlying mortgage loan prepayment rates and, consequently, the CMO's average life and yield. When interest rates decline, homeowners are more likely to refinance their mortgages or purchase new homes to take advantage of the lower cost of financing. Prepayment speeds therefore accelerate in a declining interest rate environment When rates rise, homeowners are more likely to "stay put," causing prepayment speeds to slow.

What's good for the home buyer is not necessarily good for the CMO investor. If interest rates fall and prepayment speeds accelerate, CMO investors may find they get their principal back sooner than expected and have to reinvest it at lower interest rates ("call risk"). If interest rates rise and prepayment speeds are slower, investors may find their principal committed for a longer period of time, causing them to miss the opportunity to earn a higher rate of interest ("extension risk"). Therefore, investors should carefully consider the effect that sharp moves in interest rates would have on the performance of their CMO investment.

BASIC CHARACTERISTICS OF A CMO TRANCHE

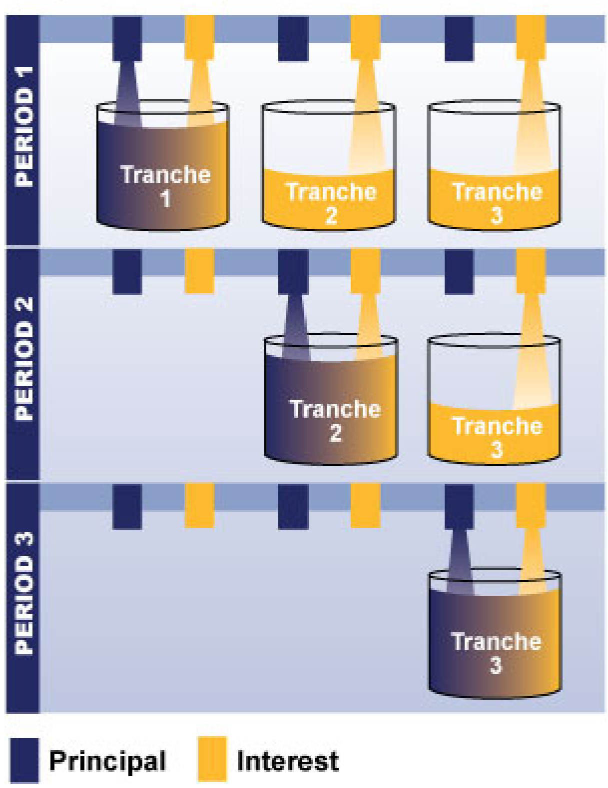
The cash flow from the CMO collateral may be allocated in a variety of ways. Usually, it is first allocated to meet the interest obligations on all tranches in the offering. Principal repayments, both scheduled and prepaid, are then distributed to the different classes of bondholders according to a predetermined priority schedule which is outlined in the CMO prospectus or offering circular. The tranche receiving principal repayment is referred to as "active" or "currently paying." In more complex structures, more than one tranche can be paying principal at a time.

Each CMO tranche has an estimated first payment date, on which investors can expect to begin receiving principal payments, and an estimated last principal payment (or maturity) date, on which they can expect their final dollar of principal to be returned. The period before principal payments begin in the tranche, when investors receive interest-only payments, is known as the "lockout" period. The period during which principal repayments are expected to occur is called the "window." Both first and last principal payment dates are estimates based on prepayment assumptions and can vary according to actual prepayments made on the underlying mortgage loans.

THE VARIOUS TYPES OF CMOs

The most basic CMO structure has tranches that pay in a strict sequence. Each tranche receives regular interest payments, but the principal payments received are made to the first tranche alone, until it is completely retired. Once the first tranche is retired, principal payments are applied to the second tranche until it is fully retired, and the process continues until the last tranche is retired. The first tranche of the offering may have an average life of 2-3 years, the second tranche 5-7 years, the third tranche 10-12 years, and so forth. This type of CMO is known as a “sequential pay,”“clean,” or “plain vanilla” offering. The CMO structure allows the issuer to meet different maturity requirements and to distribute the impact of prepayment variability among tranches in a deliberate and sometimes uneven manner.

Sequential-Pay CMO



Principal-Only (PO) Securities

Some mortgage securities are created so that investors receive only principal payments generated by the underlying collateral. These Principal-Only (PO) securities may be created directly from mortgage pass-through securities, or they may be tranches in a CMO. In purchasing a PO security, investors pay a price deeply discounted from the face value and ultimately receive the entire face value through scheduled payments and prepayments.

The market values of POs are extremely sensitive to prepayment rates and therefore interest rates. If interest rates are falling and prepayments accelerate, the value of the PO will increase. On the other hand, if rates rise and prepayments slow, the value of the PO will drop. A companion tranche structured as a PO is called a "Super PO."

Interest-Only (IO) Securities

Separating principal payments to create PO mortgage securities necessarily involves the creation of Interest-Only (IO) securities. CMOs that have PO tranches will therefore also have IO tranches. IO securities are sold at a deep discount to their "notional" principal amount, namely the principal balance used to calculate the amount of interest due. They have no face or par value. As the notional principal amortizes and prepays, the IO cash flow declines.

Unlike POs, IOs increase in value when interest rates rise and prepayment rates slow, consequently, they are often used to "hedge" portfolios against interest rate risk. IO investors should be mindful that if prepayment rates are high, they may actually receive less cash back than they initially invested.

The structure of IO and POs exaggerates the effect of prepayments on cash flows and market value. The heightened risk associated with these securities makes them unsuitable for certain investors.

Floating-Rate Tranches

First offered in 1986, "floating-rate CMO" tranches carry interest rates that are tied in a fixed relationship to an interest rate index, such as the London Interbank Offered Rate (LIBOR), the Constant Maturity Treasury (CMT), or the Cost of Funds Index (COFI), subject to an upper limit, or "cap," and sometimes to a lower limit, or "floor." The performance of these investments also depends on the way interest rate movements affect prepayment rates and average lives.

Sometimes the interest rates on these tranches are stated in terms of a formula based on the designated index, meaning they move up or down by more than one "basis point" (1/100 of one percent) for each basis point increase or decrease in the index. These so-called "superfloaters" offer leverage when rates rise. The interest rates on "inverse floaters" move in a direction opposite to the changes in the designated index and offer leverage to investors who believe rates may move down. The potential for high coupon income in a rally can be rapidly eroded when prepayments speed up in response to falling interest rates.

All types of floating-rate tranches may be structured as PAC, TAC, companion or sequential tranches, and are often used to hedge interest rate risks in portfolios.

Residuals

CMOs also contain a “residual” interest tranche, which collects any cash flow remaining from the collateral after the obligations to the other tranches have been met. Residuals are not classified as regular interest and may be structured as sequential, PAC, floating-rate, or inverse-floater tranches, and differ from regular tranches primarily in their tax characteristics, which can be more complex than other CMO tranches. CMOs issued as non-REMICs also have residuals which are sold as a separate security such as a trust certificate or a partnership interest.

CMO SETTLEMENT DATES AND PAYMENT DATES

Investors who purchase CMOs at issuance — the “issue date” — may find that their transaction takes up to a month to “settle” because of the time required to assemble the collateral, deposit it with the trustee, and complete other legal and reporting requirements. In the secondary market, CMO transactions typically settle in three business days.

Because payments to CMO investors depend on the collection and distribution of payments made by the holders of the underlying mortgage loans, a payment delay occurs when the security is first purchased. “Payment dates” for CMO tranches are defined in the prospectus and are usually stated as the 15th or 25th day of the month following the record date. Depending on when the CMO transaction settles, the investor may have to wait up to two months for the first payment, but this delay is factored into the yield quoted at the time of purchase. Once the first payment is received, future payments will be made monthly.

MINIMUM INVESTMENTS, TRANSACTION COSTS AND LIQUIDITY

The minimum investment for a CMO varies according to the structure of the offering, but most tranches sold to individual investors require a minimum investment of $1,000. CMO investments are also offered in the form of mutual funds or unit trusts which typically have $1,000 investment minimums.

A national network of mortgage securities dealers sells, trades and makes markets in CMOs. These transactions are executed over-the-counter, directly from dealer to dealer, rather than through an exchange.

CMOs are bought and sold between dealers and investors like other debt instruments. Dealers trade the securities at a net cost which includes their own spread or profit on the transaction. Spreads on CMO transactions may be wider than spreads on Treasury security transactions, because Treasury securities have a broader and deeper secondary market and are therefore more liquid.

Although there is a sizable and active secondary market for many types of CMOs, the degree of liquidity can vary widely. Investors should remember that if they sell their CMOs rather than waiting for the final principal payment, the securities may be worth more or less than their original face value.

TAX CONSIDERATIONS FOR CMO INVESTORS

The interest portion of payments to CMO investors is subject to federal, state, and local income tax. When comparing Treasury yields to CMO yields, investors should remember that interest income from Treasury securities is exempt from state and local income tax.

Any portion of the CMO payment that represents return of principal or original cost is not taxable. However, if the securities were purchased at a discount from original issue or at a market discount, different rules apply. If an investor buys a mortgage security when originally issued for a price that represents an original discount from its face value, the investor may incur a tax liability on interest which accumulates on the security before it is paid out. If the security is purchased at a discount in the secondary market (market discount), the investor may be subject to a tax on the amount of principal received in excess of the purchase price as well as on the interest.

For CMO securities held in brokerage accounts, the Internal Revenue Service (IRS) requires the broker-dealer to report the investor's aggregate amount of interest earned and original issue discount accrued during a given calendar year and allows reliance on an external source to supply such tax reporting information. If interest is earned in one calendar year, but not paid until the next, it still must be reported and may be taxable. Broker-dealers provide clients with copies of reports submitted to the IRS.

As required by federal income tax law, CMO issuers provide information to certain entities to calculate properly the taxable income attributable to CMOs. Those entities, in turn, are obligated to supply such information to individuals and other "beneficial owners" who are not exempt recipients. Investors should be aware, however, that such information need not be furnished before March 15 of any calendar year following a calendar year in which income accrues on a CMO.

Investors should consult their tax advisor for more specific information.