

Mortgage Markets



Mortgages

- Are loans to individuals or businesses to purchase a home, land or other real property.

Mortgage backed securities (MBS)

- Many mortgages are securitized.
- Mortgages are packaged and sold as assets backing publicly traded or privately held debt instruments. (mortgage backed securities MBS)

Mortgages differ from bonds and stocks

- Mortgages are backed by specific piece of real property.
- If borrower defaults on a mortgage, the FI can take ownership of property
- Corporate bonds and shares give the holder a general claim on borrower's assets

Mortgages differ from stocks and bonds

- primary mortgages have no set size or denomination
- Size of each mortgage depends on the borrower's needs and ability to repay
- Bonds and Shares have a fixed face value.

Mortgages differ from stocks and bonds

- primary mortgages generally involve only a single investor
- Bonds and stock issues by many investors

Mortgages differ from stocks and bonds

- Comparatively little information exists on mortgage borrowers, since borrowers are individuals
- Bonds and stocks are issued by publicly traded corporations, hence subject to extensive rules and regulations
- Hence information is available

Primary Mortgage Market

- Four basic types of mortgages are issued by financial institutions
 - **Home mortgages** are used to purchase one- to four-family dwellings
 - **Multifamily dwellings** mortgages are used to purchase apartment complexes, townhouses, and condominiums
 - **Commercial mortgages** are used to finance the purchase of real estate for business purposes
 - **Farm mortgages** are used to finance the purchase of farms

Mortgage Characteristics

Collateral

- Lenders place liens against properties
- Remain in place until loans are fully paid off
- Lien is a public record attached to the title of the property that gives the FI the right to sell the property if the mortgage borrower defaults.

Down payment

- A portion of the purchase price of the property a financial institution requires the borrower to pay up front
- Balance purchase price is the face value of mortgage
- Decreases the probability that the borrower will default on mortgage

Down payment

- Size of down payment depends on the FI
- Normally 20%
- If less than 20% private mortgage insurance is compulsory

Private mortgage insurance

- Insurance contract purchased by FI
- Paid by the borrower
- Guaranteeing to pay the FI
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- Difference between the value of the property and the balance remaining in the mortgage, in case of default

Federally insured mortgages

- Repayment is guaranteed by either **the Federal Housing Administration (FHA)** or the **Veterans Administration (VA)**
- Specific requirement by government agencies
- Individuals from military agency
- Maximum size limited
- Requires zero or very low down payment

Conventional mortgages

- Issued by financial institutions that are not federally insured.
- Generally required to be privately insured if borrower's down payment is less than 20% of property's value
- Secondary market mortgage buyers don't invest if loan not privately insured and loan-to-value ratio greater than 80%

Mortgage maturities

- Original maturity of either 15 or 30 years

Amortized mortgage

- When fixed principal and interest payments fully pay off the mortgage by its maturity date.
- Most mortgages allow the borrower to prepay all or part of the mortgage principal without penalty

Balloon payment mortgage

- Required a fixed monthly interest payment for a three-to-five year period
- Full payment of the mortgage principal is required at the end of the period
- Monthly payment paid prior to maturity is lower than amortized loan
- Normally a long-term mortgage

Fixed rate mortgage

- Locks in the borrower's interest rate
- Does not change over the life of the mortgage, regardless of how market rates change.
- Lender assumes interest rate risk

Adjustable rate mortgage (ARM)

- Interest rate is tied to some market interest rate
- Required monthly payments can change over the life of the mortgage
- Generally limit the change in the interest rate allowed each year and during the life of the mortgage. Called caps

Adjustable rate mortgage (ARM)

- Borrower assumes interest rate risk
- Reduces FI's interest rate risk
- Increases its default risk

Interest rate

- Mortgage borrowers choose FIs on the basis of interest
- FIs base interest rate on several factors like fed funds rate or rate on CD

Discount points

- Interest payments made when the loan is issued. (at closing)
- One discount point paid up front is equal to 1 percent of the principal value of the mortgage
- In exchange for points paid up front, FI reduces the interest rate used to determine the monthly payments on the mortgage.

Discount points

- Borrower weighs
- Reduced interest payments over the life of the loan
- Versus
- Up front fees through points

- Decision depends on the period of time the borrower expects to hold the mortgage

Mortgage Characteristics

- **Application fee** – initial costs of processing application and credit report
- **Title search** – confirm borrower's legal ownership
- **Title insurance** – protects lender against an error in title search
- **Appraisal fee** – covers the independent cost of property value assessment

Mortgage Characteristics

- **Loan origination fee** – cost of completing the loan
- **Closing agent and review fee** – cost of agent closing mortgage
- Other costs – VA, FHA or private insurance

Mortgage refinancing

- When a borrower takes out a **new mortgage** and uses the proceeds **to pay off an existing mortgage**
- Mortgages are most often refinanced when an existing mortgage has a higher interest rate than prevailing rates
- Borrowers must balance the savings of a lower monthly payment with the costs (fees) of refinancing

Mortgage refinancing

- Often-cited rule of thumb is that the new interest rate should be 2 percentage points less than the refinanced mortgage rate

Mortgage Amortization

- Each fixed monthly payment consists partly of repayment of the principal and partly of the interest on the outstanding mortgage balance
- An **amortization schedule** shows how the fixed monthly payments are split between principal and interest

Jumbo mortgages

- Mortgages that exceed the conventional mortgage conforming limits.

Subprime mortgages

- Mortgages to borrowers who have weakened credit histories

Alt-A mortgages

- Alternative A-paper
- Mortgages that are considered more risky than a prime mortgage and less risky than a sub-prime mortgage.

Option ARMs

- Adjustable rate mortgages that offer the borrower several monthly payment options

Second mortgages

- Loans secured by a piece of real estate already used to secure a first mortgage

Home equity loan

Loans that let customers borrow on a line of credit secured with a second mortgage on their homes.

Reverse-annuity mortgage

- A mortgage for which a mortgage borrower receive regular monthly payments from a FI rather than making them.
- When RAM matures (or the borrower dies) the borrower (or the estate of the borrower) sells the property to retire the debt.

Secondary mortgage markets

Secondary mortgage markets

- After FIs originate mortgages, they often sell or securitize them in the secondary mortgage market.
- Reduces liquidity risk, interest rate risk and credit risk of FIs if kept in its asset portfolio.
- Many FIs such as mortgage companies prefer to concentrate on the servicing of mortgages rather than the long-term financing of them, which occurs if kept on balance sheet.

Secondary mortgage markets

- Loan originator may also act as a servicer, collecting payments from mortgage borrowers and passing the required interest and principal payments through the secondary market investor.
- Servicer keeps the formal records of all transactions pertaining to the mortgage
- In return for these services, FIs collect a monthly fee, $\frac{1}{4}$ or $\frac{1}{2}$ percent of mortgage balance.

Secondary mortgage markets

- FIs remove mortgages from their balance sheets through one of two mechanisms.
 - 1. They can pool their recently originated mortgages together and sell them in the secondary mortgage market.
 - 2. FIs can issue mortgage-backed securities, creating securities that are backed by their newly originated mortgages. (i.e. securitization of mortgages)

Mortgage sales

- Sale of a mortgage originated by a bank with or without recourse to an outside buyer.

Recourse

- Ability of a loan buyer to sell the loan back to the originator should it go bad.

Mortgage sales

- **Correspondent banking:**
- A relationship between a small bank and a large bank in which the large bank provides a number of deposit, lending, and other services.
- Large banks often sell parts of their loans, called *participations*, to smaller banks.

Mortgage sale

- Occurs when a FI originates a mortgage and sells it with or without recourse to an outside buyer.
- If mortgage is sold without recourse, the FI not only removes it from its balance sheet but also has no explicit liability if the mortgage eventually goes bad.
- Buyer of the mortgage (not the FI that originated the loan) bears the credit risk.

Mortgage sale

- Mortgage is sold with recourse, under certain conditions the buyer can return the mortgage to the selling FI
- FI retains a contingent credit risk liability
- Most mortgage sales are without recourse

Mortgage sale

- Reason that FIs sell loans is to manage their credit risk better and allow a FI to achieve better asset diversification
- Allows FIs to improve their liquidity risk and interest rate risk.

Mortgage sale

- Other than risk management, FIs are encouraged to sell loans for a number of other economic (generation of fee income) and regulatory reasons (including reducing the cost of reserve requirements and reducing the cost of holding capital requirement against mortgages)

Mortgage loan

- Buyers:
- Domestic banks
- Foreign banks
- Insurance companies
- Pension funds
- Closed-end bank loan mutual funds
- Nonfinancial institutions

Mortgage sales

- Sellers
- Money centre banks
- Small regional or community banks
- Foreign banks
- Investment banks

Mortgage-Backed Securities

- Pass-through securities
- Collateralized mortgage obligation (CMO)
- Mortgage backed bond (MBB)

Pass-through securities

- Mortgage backed securities that 'pass-through' promised payments of principal and interest on pools of mortgages created by FIs to secondary market participants holding interests in the pool.

Pass-through securities

- After FI accepts mortgages
- Pool them
- Sell interests in these pools to pass-through securities holders.
- Each pass-through mortgage security represents a fractional ownership share in a mortgage pool.

Pass-through securities

- Originating FI or a third-party servicer receives principal and interest payments from the mortgage holder and passes these payments (minus a servicing fee) through to the pass-through security holders.

Collateralized mortgage obligations (CMO)

- A mortgage-backed bond issued in multiple classes or tranches.
- Tranche:
- A bond holder class associated with a CMO.

CMO

- A pass-through gives each investor a pro rata share of any interest or principal cash flows on a mortgage pool.
- CMO can be viewed as multiclass pass-through, with a number of different bond holder classes or tranches.

CMO

- Pass-through has no guaranteed annual coupon
- Each bond holder class in CMO has a different guaranteed coupon paid semi annually just as a regular T-bond.

CMO

- Allocation of any excess cash flows over and above the guaranteed coupon payments due to increased mortgage prepayments goes toward retiring the principal outstanding of only one class of bond holders,
- leaving all other classes prepayment protected for a period of time.

CMO

- CMOs give investors greater control over the maturity
- Pass-through securities has a highly uncertain maturity date due to the risk of very rapid prepayments called *prepayment risk* by the mortgagees.

Mortgage Backed Bonds (MBB)

- While pass-throughs and CMOs help FIs remove mortgages from their balance sheets,
- MBBs normally remain in balance sheet

MBB

- While pass-throughs and CMOs have a direct link between the cash flows on the underlying mortgages and the cash flows on the bond instrument issued
- MBBs are not necessarily directly connected to interest and principal payments.

MBB

- FI issues an MBB to raise long-term low-cost funds
- MBB holders have first claim to a segment of the FI's mortgage assets
- FI segregates a group of mortgage assets on its balance sheet and pledges this group of assets as collateral against the MBB issue.

MBB

- A trustee normally monitors
- MBBs are backed by excess collateral
- Ensures high investment grade credit rating

MBB

- Costs:
 1. Ties up mortgages on the FI's balance sheet for a long time
 2. Balance sheet illiquidity is enhanced by the need to over collateralize MBBs
- Decreases the asset portfolio's liquidity

MBB

- 3. FI continues to be liable for capital adequacy and reserve requirement