Fin 5413:
CHAPTER NINETEEN

THE SECONDARY MORTGAGE MARKET and PASS THROUGH SECURITIES

The Good Old Days

- Banks and Savings and Loans made loans and held these loans in portfolio
- The interest paid on the loan was use to pay interest to the depositors
- Mortgage brokers originated some loans for out of state “thrifts” and for insurance companies

The New Way

- There is usually a separation between loan origination and loan ownership
- Even if a bank “makes” a mortgage loan, it most often “sells” it
- Most of the origination business today is done by Mortgage Bankers and Mortgage Brokers
- Servicing rights may be separate from ownership

Depository Lenders in the Primary Market

- Commercial Banks
- Savings Institutions (thrifts)
- These institutions take customer deposits and originate and service loans.

Nondepository Lenders in the Primary Market

- Mortgage bankers
  - originates and services loans which are sold on the secondary markets
  - Warehouses loans to package as pools (may bear “pipeline” risk
- Mortgage brokers
  - finds other loan originators to place a loan with

Secondary Markets

- Standardization and known products allows for efficient secondary markets which was helped by:
  - Uniform underwriting standards
  - Title Insurance
  - Hazard Insurance
  - Mortgage Insurance for low down payment mortgage and possibly other credit enhancement

Mortgage Markets

- Primary mortgage market – money flows between the people whose name is on the note
  - Lenders and borrowers
- Secondary mortgage market – money flows among investors
  - Conduits, investment bankers and investors
  - Mortgage-backed securities

Secondary Mortgage Markets

- Purpose:
  - To replenish mortgage funds to originators
  - To provide investors with mortgages or mortgage backed securities as investment alternatives
- Early days:
  - Eastern Thrifts with surplus funds would buy mortgages from California
  - Life insurance companies would buy packages of mortgages from mortgage bankers or brokers

Secondary Mortgage Markets

- The first large scale secondary market was for FHA and VA loans. These loans have Federal guarantees as to timely payment of principal and interest
- After the success of the secondary mortgage markets for FHA and VA loans, similar programs were adopted for conventional loans

Government-Sponsored Mortgage Programs

- FHA-Insured Loans
- VA-Guaranteed Loans
  - Neither the FHA or VA originates loans

FHA- Insured Loans

- FHA loans are made by private lenders through various programs (e.g. section203 loans)
- FHA insurance protects the lender from losses due to default and foreclosure
- FHA borrowers pay an up front premium, plus a monthly premium for FHA insurance
- Maximum FHA loan amounts vary depending on an area's median house price
- Allows for very low down payment

VA-Guaranteed Loans

- VA loans are made by private lenders (available to U.S. Veterans)
- VA guarantees the lender against loss up to 100% of a property's value
- VA charges a funding fee based on the size of the LTVR
- Maximum VA loan amounts exist
- No down payment is required and no discount points can be paid by the borrower

Ginnie Mae, GNMA

- Government National Mortgage Association – part of HUD
- GNMA was created in 1968
- GNMA guarantees the timely payment of principal and interest on Mortgage Backed Securities (MBS, primarily FHA and VA pools)
- GNMA also purchases mortgages designed by the FHA for low and moderate - income buyers

GNMA Payment Guarantee

- GNMA was empowered to guarantee timely payment of PI, on securities backed by FHA, VA, and FmHA
- GNMA resulted in an expansion of secondary market
- Pass-through securities (MPTs)
- Default risk minimized

FNMA – Fannie Mae

- Federal National Mortgage Association, FNMA (Fannie Mae)
  - Used to be part of HUD (Housing and Urban Development).
  - It is a quasi private firm with stock that trades on the NYSE
  - About 1/3 of its Board of Directors is appointed by the President of the United State
  - Has some rights to borrow from the Treasury

Fannie Mae, FNMA

- FNMA was organized in 1938 to purchase FHA loans
- FNMA reorganized in 1968 and authorized to purchase conventional mortgages in 1970
- FNMA obtains funds from the sale of its stock, its MBS, by issuing bonds, and from its earnings
- The mortgages held and MBS issued by FNMA account for $2.8 trillion (Annual report, 2007) of the $11.8 trillion of residential mortgages outstanding

Freddie Mac, FHLMC

- Federal Home Loan Mortgage Corporation
- FHLMC was created in 1970 to provide a secondary market for S&L associations
- FHLMC currently buys both government-underwritten and conventional loans
- Freddie Mac and Fannie Mae are now operationally similar
- The mortgages held and MBS issued by Freddie Mac account for $2.1 trillion (Annual report, 2007) of the $11.8 trillion of residential mortgages outstanding

Operation of Secondary Market

- Direct sale programs – sell loans to life insurance companies and other financial institutions that wish to hold mortgages as part of their financial assets
- Mortgage-related security pools – sell securities on Wall Street that are backed by mortgages

Direct Sale Programs

- Originators
  - Mortgage companies
  - Thrifts
  - Commercial Banks
  - others
- Buyers
  - Life insurance companies
  - Eastern thrifts
  - FNMA
  - FHLMC

Mortgage Related Security Pools

- MBS – mortgage backed securities (generic term)
- MBBs – mortgage backed bonds
- MPTs (mortgage pass throughs) – money from mortgage payments are passed through to investors of these securities
- MPTBs (mortgage pay through bonds) – act like a pass through in terms of payouts, but are technically bonds
- CMOs (collateralized mortgage obligations)

Mortgage Backed Bonds

- These bonds are sold to provide the funds to purchase mortgages
  - Are corporate like bonds backed by mortgages and are rated like any corporate bond (tend to have high credit ratings)
  - FNMA and FHLMC are the largest issuers
  - Fixed coupon rate with stated maturity
  - Issuer retains ownership of mortgages
  - Mortgages pledged as security
  - Over collateralization and possibly other credit enhancement if based on risky private or commercial mortgages

Mortgage Pass-Through Securities (MPT's)

- Mortgage originations are pooled by the loan originators, by investment bankers, or FNMA or FHLMC
- A pass through, basically passes through the P and I payments from the note holders to the securities holders. (an undivided equity interest in the pool of mortgages)
- The pass through market was created by GNMA through insuring the timely repayment of principal and interest on FHA and VA mortgages

Mortgage Pass-Through Securities

- Typically about 50 basis points of the interest rate on the mortgages goes to:
  - the servicer (about 25 bp), and
  - the organization guaranteeing the timely repayment of the P and I on the mortgages (guarantee fee of 25 bp)
- It the average note rate on a pool of mortgages (called the weighted average coupon) was say 6.5%, the investors would receive a coupon rate of 6.0%

Mortgage Pass-Through Securities

- A number of Mutual Funds invest exclusively in MPT's
  - https://personal.vanguard.com/us/funds/snapshot?FundId=0036&FundIntExt=INT
- Large or small investors may hold MPT's
- A major financial risk for MPT's if the risk of early repayment when interest rates fall

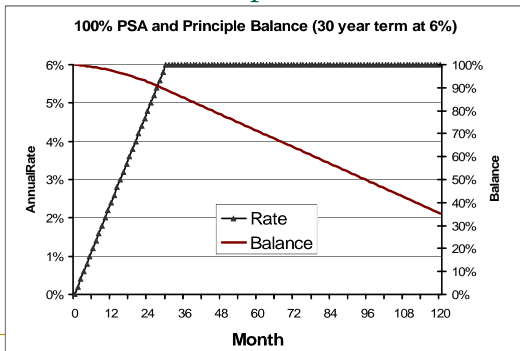
Mortgage Pass-Through Securities

- The actual payments to the security holders depends on the degree of mortgage prepayments, which the security holder has no control of
- Sometimes an originator will swap a pool of mortgages for an equivalent value of MPT's
- MPT's have a higher interest rate than a comparable bond because homeowners tend to refinance when interest rates fall

Estimating Early Repayment

- Constant prepayment rates (assume x% each year will prepay)
- Historical Experience (e.g. the so called FHA termination rate
- PSA (Public Securities Administration) repayment rate

The PSA Assumption



Cash Flow by PSA Assumption