FIN 4713 Final Exam

80 multiple choice questions
49 no calculation required
3 require calculation
3 extended problems - FEM
ARM
Fin Analysis

Total 29 pts

Chp 2  5 points
Chp 6  3 points
Secondary MKts  7 points

You are responsible for knowing acronyms and abbreviations such as: ARM, CAM, EO, MPT etc.
FNMA  Fannie Mae
Federal National Mortgage Association
used to be part of HUD (Housing & Urban Development)
It is now a quasi public firm (traded on the NYSE) The President of the US appoints about 1/3 of the board members Fannie has some right to borrow from the US Treasury

Freddie Mac or FHLMC
Federal Home Loan Mortgage Corporation
Was set up by Federally Chartered Thrifts. Freddie can borrow from this group. It's also a so called "Quasi" Federal Agency that is a private firm (traded on NYSE)

GNMA = Ginnie Mae - part of HUD guarantees payments to investors in FHA/VA loans

GNMA  Government National Mortgage Assoc
Purpose of Secondary Markets

1. To replenish mortgage funds to originators
2. To provide investors with mortgage backed securities

There are 4 primary types of mortgage securities available:

1. Mortgage Backed Bonds (MBB)
2. "Pass Through" Securities (PT)
3. Mortgage Pay Through Bonds (MPTB)
4. Collateralized Mortgage Obligation (CMO)

Mortgage Backed Bonds

These are bonds that are sold by mortgage purchasers to fund the purchase of the mortgages. FNMA & FHLMC are the largest issuers of MBB's.

These are corporate bonds. They are issued with a stated coupon rate and may be callable.
after a "lock out" period. They have mortgages pledged as collateral.
They tend to be high quality investor-grade bonds.
Bonds issued by Fannie & Freddie are seen as almost as high quality Treasuries.
For lower quality mortgages (subprime or risky commercial) issued by private Underwriters, "credit enhancement" may be used to increase their rating.
The bonds are typically "over collateralized" meaning that the face value of the bonds is lower than the face value of the underlying mortgages.

(2) Mortgage Pass Throughs (MPTs)
A mortgage pass through is an undivided equity interest in a pool of mortgages. Basically "your share" of cash flows from the pool are passed through to you.
The pass through market was created by Ginnie Mae which insured timely...
repayment of principal and interest. In other words, if the note holder was late on a payment, Ginnie Mae sent the payment on to the investor. If a note holder defaulted, Ginnie Mae paid off the note to the investor.

On an MPT, the actual payments to the security holder depend on the degree of mortgage prepayments. Sometimes a mortgage originator will trade a pool of mortgage for Pass Throughs (to get geographic diversity and guaranteed payments). MPTs have a higher interest rate than a comparable bond because home owners tend to refinance when interest rates fall. So a major financial risk for MPT is the risk ofearly repayment when interest rates fall.
Estimating Early Repayment 11/25/03

1. **Constant Prepayment Rate**
   Assume x% prepay each period

2. **Historical Experience** (e.g., so-called FHA termination rate)

3. **PSA Prepayment Rate**
   (Public Securities Administration)

<table>
<thead>
<tr>
<th>Rate</th>
<th>6% per year</th>
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<tbody>
<tr>
<td>PSA</td>
<td>100% PSA</td>
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<tr>
<td>30</td>
<td>Months</td>
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The problem for a MBS issuer is that mortgage payoffs are unknown, but the term on a bond is stated. A solution was to create a MPTB (Mortgage Pay Through Bond) which is a debt instrument but its payout reflects the payout of a pool of mortgages like a MRT. (Recall a MRT represents an undivided equity interest in a pool)
For an investor the uncertain nature of payoffs from MPT can be problematic. A solution was found in the 1980's with the creation of CMO's (Collateralized Mortgage Obligations)

REMIC A Real Estate Mortgage Investment
Conduit

This is a tax status for a mortgage pool (similar to the tax status of a mutual fund or REIT). The REMIC is not taxed at the entity level. All taxation is at the individual level to prevent double taxation.

CMO are debt instruments created from pools of mortgages or from MPT's

A CMO is a group of debt instruments that have claims on a portion of the cash flows from a pool of mortgages