Fin 4713: Chapter 7

1. Financing And Property Values
2. Incremental Financing Costs
3. Refinancing

Chapter 7
Learning Objectives
- Understand how the terms of financing affect the transaction price of real estate
- Understand the theoretical issues related to the interaction of financing and transaction prices
- Understand the different types of financing alternatives that affect transaction prices

MARKET FINANCING VS NON-MARKET FINANCING
- Market Financing - Typical financing with current terms as offered by institutional mortgage lenders
- Non-market (Creative) Financing - Financing with terms other than market financing. May be a different interest rate or other terms

EXAMPLES OF NON-MARKET FINANCING
- Assumable Loan - buyer takes over payments on an existing mortgage.
- Carryback Financing - seller provides financing of some form
- Buydown - seller pays prepaid interest to "buy down" the buyer's interest rate
- Land Contract - seller provides financing and retains title until some future time

CREATIVE FINANCING ISSUES
- Various factors may affect the value attached to creative financing, e.g.
  - the length of the intended holding period
  - the amount of tax-deductible interest
  - the required down payment

FHA/VA DISCOUNT POINTS
- FHA/VA loans had interest rate ceilings until the 1980s
- Were time periods when the market rate was above the ceiling rate
- FHA/VA properties should sell for more than those with conventional loans when rates are limited and points are charged
SELLER-PAID DISCOUNT POINTS

- Seller pays discount points on borrower’s loan
- Would expect points to be capitalized into the price of the house
- Some studies show the price increase to be greater than the benefit to the buyer

ASSUMABLE LOANS

- Have value if the contract rate is less than the market rate
- Value of the assumable loan should be capitalized into the price of the house
- Cash equivalent is value of the property if financed with cash or current market financing
  - Appraisers need to adjust values to cash equivalent when comparing properties
- Loan value is tied to payment savings

BUYDOWN FINANCING

- Seller pays money to lender to “buy down” the interest rate for the buyer for a specified time
- Lender receives the funds up front and lowers the interest rate on the loan
- Empirical research shows that the buydown was at least partially capitalized into the house price

LAND CONTRACTS

Also called, “Contract for Deed”

- Financing provided by the seller
- Higher than market price may be paid if the contract terms are favorable to the buyer
- Seller retains title but buyer obtains use of the property
- May be used when buyer does not meet “conforming” standards

MORTGAGE REVENUE BONDS

- Commonly referred to a municipals
- Issued by state and local governments
- Interest is free from federal income tax
- Industrial bonds are used to construct industrial parks
- Used to support affordable housing by using funds to subsidize interest rates
  - Example: Texas Vet Financing is funded from this type of bond

Fin 4713
CHAPTER 7a
– Additional Material

MORTGAGE FINANCIAL ANALYSIS
Objectives

- Calculate the incremental cost of borrowing
- Evaluate the effect of prepayment penalties, origination fees and other charges
- Calculate the market value of an outstanding mortgage loan
- Below market financing and effect on sales price

Ex 7.1. Incremental Borrowing Cost

You are wondering how large of a down payment to make on the house you are purchasing. Two (25-yr) loans are available, Alt I for an 80% LTV has a rate of 12% and Alt II for a 90% LTV has a 13% rate. What is the incremental cost of borrowing the incremental 10%?

<table>
<thead>
<tr>
<th>Loan Amt</th>
<th>Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT.II @ 13%</td>
<td>$ 90,000</td>
</tr>
<tr>
<td>ALT. I @ 12%</td>
<td>80,000</td>
</tr>
<tr>
<td>Difference</td>
<td>$ 10,000</td>
</tr>
</tbody>
</table>

I/YR(PMT=172.47, PV=-10,000, N=300) = 20.57%

Ex 7.2. Incremental Borrowing Cost

What if there are 2 points charged on the ALT II loan? The payment does not change, but less cash is disbursed making the incremental cost higher. What is the incremental cost of borrowing the incremental amount?

<table>
<thead>
<tr>
<th>Loan Proceeds</th>
<th>Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT.II @ 13%</td>
<td>$ 88,200</td>
</tr>
<tr>
<td>ALT. I @ 12%</td>
<td>80,000</td>
</tr>
<tr>
<td>Difference</td>
<td>$ 8,200</td>
</tr>
</tbody>
</table>

I/YR(PMT=172.47, PV=-8,200, N=300) = 25.19%

Ex 7.3. Early Repayment (data from Ex 7.1)

<table>
<thead>
<tr>
<th>Loan Amount</th>
<th>Monthly Payment</th>
<th>Loan Balance- after five years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT.II @ 13%</td>
<td>$ 90,000</td>
<td>$ 1015.05</td>
</tr>
<tr>
<td>ALT.I @ 12%</td>
<td>80,000</td>
<td>842.58</td>
</tr>
<tr>
<td>Difference</td>
<td>$ 10,000</td>
<td>$ 172.47</td>
</tr>
</tbody>
</table>

Ex 7.3: Calculator Solution

- I/YR(PV=-10000, N=60, PMT=172.47, FV=10,117.32)
- I/YR = 20.83%

Ex 7.4. Early Repayment with points. (data from Ex 7.2)

<table>
<thead>
<tr>
<th>Loan Amount</th>
<th>Monthly Payment</th>
<th>Loan Balance- after five years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT.II @ 13%</td>
<td>$ 88,200</td>
<td>$ 1015.05</td>
</tr>
<tr>
<td>ALT.I @ 12%</td>
<td>80,000</td>
<td>842.58</td>
</tr>
<tr>
<td>Difference</td>
<td>$ 8,200</td>
<td>$ 172.47</td>
</tr>
</tbody>
</table>
Ex 7.4: Calculator Solution

- I/YR(PV=-8200, N=60, PMT=172.47, FV=10,117.32)
- I/YR = 27.46%

Refinancing an Existing Loan

- To withdraw equity from the house – possibly to pay off other debt
  - Such loans are seen as riskier than other refinances as it shows the borrower has other financial payments
- To improve the house
  - Add rooms, a swimming pool, redo kitchen, etc.
- To shorten the amortization period
- To lower the payments
  - May refinance to an option ARM or teased ARM

Refinancing an Existing Loan (cont.)

- In response to lower interest rates
  - The optimal time to refinance a mortgage in response to lower interest rates is a very complex financial decision (Why?)
  - Balance may increase if you borrow money for the fees
  - Term may lengthen (refinance to same term as your original term)
  - If there are no fees, refinance whenever interest rates fall
- Yield maintenance agreements and shorter terms creates fewer refinance opportunities for commercial mortgages

Example 7.5. Refinancing a loan in response to lower interest rate

- You currently have an 8%, 30-year loan you took out 2 years ago. You can refinance this at 6.5% with 3 points in fees to a new 28 year loan. You expect to keep this new loan for 2 years. Your original note was for $80,000 and you will take the closing costs from your savings account that is currently paying 5%. Is this a good choice?

Example 7.6. Refinancing a loan in response to lower interest rate

- You currently have an 8%, 30-year loan you took out 2 years ago. You can refinance this at 6.5% with 3 points in fees to a new 30-year loan. You expect to keep this new loan for 2 years. Your original note was for $80,000 and you will add the closing costs to your existing loan balance. Is this a good choice?
Predatory Lending/Equity stripping

- Part of root of the subprime crisis of today is from "equity stripping"
  - Equity stripping occurs when a loan is refinanced to another loan (typically with lower payments) but there are a lot of fees with the new loan that are borrower so that the loan balance is significantly increased (equity stripping). The payment may be lower due to option ARM type characteristics or teasers. The fees for the new loan may include a prepayment penalty on the previous loan, and possibly a prepayment penalty on the new loan.

Why is the refinance decision so difficult?

- Biggest reason is that we cannot predict the future of interest rates, or how long we will keep a new loan
- Most "refinance calculators" do not understand this and are thus based on static assumptions that interest rates will remain constant at their current level and that you can predict how long you will keep the loan for.
- When interest rates fall, mortgage brokers will troll legal records to find prospects

Early Loan Repayment: Lender Inducements

- Bonds are freely traded, so that when interest rates rise, bond values fall. If interest rates rise the difference between the statutory balance on the loan, and its market value will diverge. Occasionally lenders will offer borrowers an inducement to pay off their loan.
  - What are the risks of this strategy?

Market value of existing mortgage

- The market value of a loan is the present value of its expected payments
- Just as the market value of bond fluctuate as interest rates change, so will the value of a mortgage
- The expected payments is highly dependent on the prepayment assumption. When valuing bonds, one typically assumes they are held to maturity.

Ex 7.7. Market Value of a Loan

- You took out a 9%, 30-year mortgage for $160,000, four years ago. Current rates are 6.5%.
- What is the market value of this loan if:
  - You keep the loan until maturity
  - You payoff the loan 4 years from now
- Realistically, how does the market value this loan?
- What if the current rate is 10%?

Ex 7.8. Value of Financing Incentive

- Condo's are selling very slowly in Taos, NM (and probably lots of other places). La Vida Feliz (possibly taking its clues from furniture stores) is offering no down payments, and no payments for a year. What is the value of this inducement to the buyer?
- Assumptions: $250,000 unit when the 30-year note rate is 7%.
  - Why does the builder not just cut the price?
Ex 7.9. Builder Buy down

- To move inventory a builder is offering either a mortgage at 6% when rates are 6.5%, or a 2/1 buy down (2% lower interest rate the first year followed by a 1% buy down the second year). What are the values of these alternative financing alternatives (160,000 note amount) assuming you will keep the loan for a) 3 years, or b) 8 years.

Ex 7.10. Assuming an existing note

- Five years ago you purchased a new home for 100,000 (with a 20% down payment). You now have an offer in hand from a buyer for $150,000, subject to the buyer assuming your 5.5% loan. The buyer can get a 25-year second mortgage at 7.5% as long as he puts 20% equity into the deal. New 80%-LTV, 25-year mortgages are available at 6.5%. What is the apparent value of the note assumability (assume a 7 year horizon for the purchaser).

Assuming an existing note

- Some notes are assumable, meaning that a new borrower can take over an existing loan.
- This is an attractive feature for sellers when interest rates are rising (a way to capitalize on the value of the loan).
- Appraisers have to be careful to incorporate the value of this or other special financing when placing a value on real property.
- If the house has gone up in value, the buyer may need additional financing such as a second mortgage.

Wrap Around Loans

- Used to obtain additional financing while keeping an existing loan in place.
- The new lender takes responsibility for paying the old note so and you make your entire payment to your new lender.
- This protects the new lender by knowing that you are keeping your current loan current.