Texas
REAL ESTATE

Chapter 10

Lending Practices

Loans

- Term loan – interest payments only until due
  - Also called bullet loan or interest only loan.
- Amortized loan – regular equal payments for life of loan including both principal & interest.
- Budget Mortgage – principal + interest + taxes + insurance (PITI payments)
- Balloon loan – any loan that has a final payment larger than any of the previous.
- Partially amortized loan – series of amortized payments with a balloon payment at maturity.

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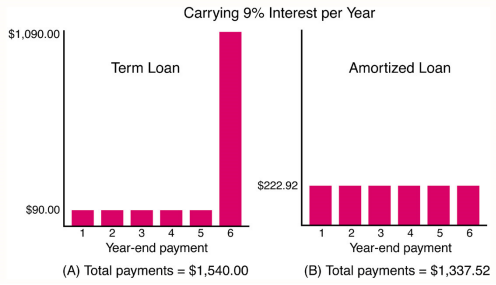
Repaying a 6-year, $1,000 Loan



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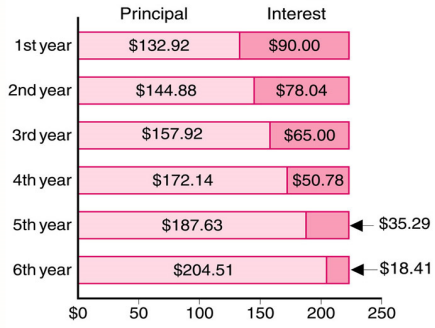
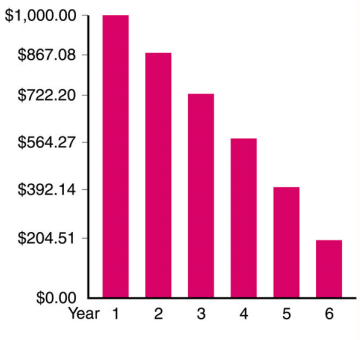
P & I per Year on the Amortizing Loan



Balance Owed Each Year of the Loan



Early Payoff

- Take out a loan with a shorter term – say a 15-Year Loan
- Make more than 12 payments a year (Biweekly Payments or ½ your monthly gives one extra payment per year)
- Pay more than the required amount to more quickly amortize your existing loan
- If interest rates fall, refinance to a shorter term loan

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Loan-to-Value Ratio

- The relationship between the amount the lender is willing to loan and the market value of the property.

- Market value = $100,000
  Loan = $80,000
  What is the loan-to-value ratio (LTV)?

80%

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- Equity – the difference between the value of the property and outstanding debt.
- Loan Points – one percent of the loan amount paid as an up front financing cost
- Origination fee – a fee lender charges for making loan usually stated in terms of a percentage of loan amount.
- Discount points – lender's charge to raise the return on the loan usually stated as a percentage of the loan amount.

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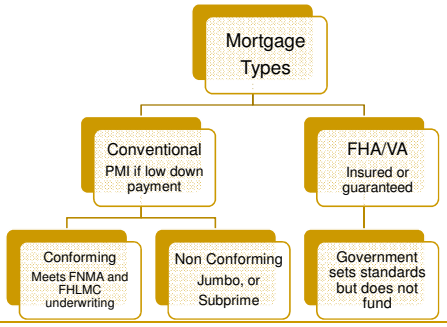
Mortgage Taxonomy



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FHA – Federal Housing Administration

- From textbook, "the FHA offered to insure lenders against losses due to nonrepayment when they made loans on both new and existing homes. In turn, the lender had to grant 20-year fully amortized loans with loan-to-value- ratios of 80% rather than the three-to five-year, 50% to 60% term loans common up to that time."
- Note: The FHA does NOT make loans. It insures loans underwritten to its standards.

FHA
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPEMENT

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VA and FHA in Comparison

FHA	VA
1934 Insures loans UFMIP Anyone qualified Rate negotiable Points 3.5% down 96.5% L-T-V	1944 Guarantees loans Funding fee Veterans only Rate negotiable Points No down payment 100% L-T-V
May borrow the UFMIP as part of initial loan balance	For both, loan size is effectively constrained

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VA and FHA Similarities

- Owner-occupied
- 1-4 family dwellings
- Refinancing allowed
- Assumption allowed *(**with approval**)*

FHA loan limits

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Want to know more?

- FHA
  - http://www.hud.gov
- DVA
  - http://www.homeloans.va.gov/veteran.htm
- Conventional
  - http://www.ourbroker.com/limits.htm

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Conventional Loans

- In theory its an individually negotiated loan with a lender
- In practice, all lending is now very similar
- Commonly used when one has a higher down payment, and higher credit rating
- Conforming means – Can be sold to FNMA or FHLMC
  - Meets income standard
  - Meets credit standard
  - Meets size standard

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Conventional Loans - continued

- Non-Conforming means
  - subprime
  - jumbo

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Portfolio Loans

- Loans the lender keeps on its books rather than selling

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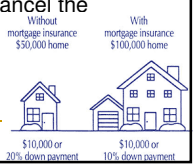
Private Mortgage Insurance

- PMI is required for conforming loans with down payments of less than 20%
- PMI insures only the top 20% to 25% of a loan.
- Insures lenders against foreclosure losses.
- If the principal of the loan is 80% or less of the current fair market value of the home, the borrower may have the right to cancel the insurance.



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Rural Housing Services Administration

- offers programs to help purchase or operate farms
- may provide the funding for the loan

Key Terms

- Amortized loan
- Balloon loan
- Conventional loans
- Equity
- FHA
- Impound account
- Loan origination fee
- Loan-to-value ratio
- Maturity
- PITI
- PMI
- Point
- Principal
- UFMIP
- VA

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Interest Due

- Interest Due is the mirror image of interest earned
- In Principles of Finance you learned that interest earned is:
  - Interest rate * Amount Deposited
- Interest due is:
  - Interest rate * Amount Borrowed

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Periodic Interest Rate

- The periodic interest rate is the APR divided by the periods per year
- For mortgages, the period is usually one month
- The monthly interest rate charged can then be computed as:
  - **APR%/1200**
    - **(that's because there are 12 months in a year, and percent means per 100)**

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Interest Due Example

- You borrowed $250,000 last month at 6 3/8%. How much interest is due now?
- 250,000*6.375/1200 = 1328.13
- If you make a payment more than 1328.13, you will be "amortizing" your loan
- If you make a payment less than 1,328.13 you will have negative amortization, or more pleasantly called, positive accrual

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Example Bullet (IO) Loan

- Some commercial mortgages are interest only, which means each month you must pay the interest due. Your principal balance stays the same over time. These are often called bullet loans.
- What is your monthly interest payment on a 5.375% bullet loan for an $18,000,000 loan?
- 18000000*5.375/1200 = 80,625
- What is your balance after 5 years?

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Application of payments to loan balances

- Your loan contract will specify the use of payments on your loan. Typically money will first be used to make up any arrears in payments or any penalties you have incurred
- If you are paying according to schedule, your payment will first be applied to interest due.
- Any amount of your payment that exceeds the interest due will be used to amortize (pay down) the principal

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Amortization Example

- For the previous Interest Due example, say you made of payment of $1500.
- First the 1328.13 interest would be subtracted from your payment and the remaining amount (1500 – 1328.13 = 171.88) would be used to pay down the principal. Your new principal amount would be
- 250,000.00 – 171.88 = 249,828.12

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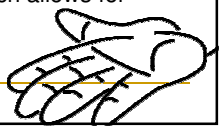
Loan Amortization

- If your loan payment and interest rate are constant, your calculator can do the amortization calculations for you.
- If you loan payment changes every month, and if the interest rate changes every month, you will need to do a month by month amortization of the loan which allows for these changes.



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Calculator hints

- Clear the calculator before new problems (Use the C ALL)
- Make sure:
  - The desired number of decimal places are displayed
    - Set using DISP followed by entering a digit
  - You have the correct payments (periods) per year
    - Set by typing a number then press P/YR
    - Check by holding down C ALL

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Calculator hints (continued)

BEGIN indicator is not displayed, unless you are told this problem has beginning of period cash flows

- Set using BEG/END

If you have a comma where you should have a decimal point (European notation) then toggle to decimal by:

- Toggle using ./,

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Notation when using Calculator

- P/YR = 12 (indicate the periods per year)
- PMT(PV=-270,000, I/Yr = 6, N=180) = 2278.41
- Order of inputs does not matter
- Negative sign for PV indicates a cash outflow
- N = number of periods
- I/YR = stated annual interest rate
- The last button one pushes is what you want to solve for: in this case PMT.

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Amortization function on Calculator

- One sets up the Amortization table in the calculator by entering the starting period and pressing the INPUT key, and then entering the ending period and pressing the AMORT key.
- Press the = key to cycle through the principal paid, the interest paid, and the ending balance.

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Amortization Example

- For the previous example, how much interest will be paid in the second year?
- First solve for the monthly payment
  - PMT(PV=-270,000, I/Yr = 6, N=180) = 2278.41
- Then:
  - 13 INPUT
  - 24 AMORT
- Press the = sign twice to get the interest payment of 15,182.12

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Effective Borrowing Cost (EBC)

- The cost to a borrower exceeds the note rate, both because of fees paid to the lender, and fees the lender requires to be paid to third parties to secure the loan.
- Third-party expenses: Borrower expenses *not* paid to lender:
  - Mortgage insurance premium
  - Recording fees
  - Lender's title insurance
  - Appraisal
  - Survey
- Effect of lender fees and third party costs:
  - Borrower receives less than lender's actual disbursement
  - EBC > lender's yield/IRR > note rate

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Example Bullet (IO) Loan - Revisited

- What is your monthly interest payment on a 5.375% bullet loan for an $18,000,000 loan?
- 18000000*5.375/1200 = 80,625
- What is your balance after 5 years?

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Yield to Lender

- A lender typically charges "points" and other fees to the borrower
- One point is one percent of the loan amount
- Assume that for the 5 year balloon loan the borrower had to pay the lender 2 points and had to pay 3rd parties a sum of $125,000. What is the yield of this loan to the lender, expressed as an IRR/YR (APR). In this case, the payments are as stated earlier, but the amount the lender disburses is reduced by 2%, which is $360,000 to cover points
- I/YR(N=60, PV=-17640000, PMT=80625,FV= 18000000,) = 5.837%, which is higher than the note rate of 5.375%

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Cost to Borrower

- In addition to the point, the borrower must pay third party charges of $125,000 so essentially receives $125,000 less from taking out the loan (lowers the PV). All other figures are the same as for the yield to the lender.
- I/YR(N=60, PV=-17515000, PMT=80625,FV= 18000000,) = 6.000%, which is higher than the note rate of 5.375%, and higher than the yield to the lender (5.837%).

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Effect of early loan repayment

- Lets assume the same situation as before, but with the loan being paid off after 3 years (36 months). In this case, the only figure that changes is the number of months.
- Yield to lender: I/YR(N=36, PV=-17640000, PMT=80625,FV= 18000000,) = 6.106%, which is higher than the cost if the loan is held for 60 months
- Cost to borrower: I/YR(N=36, PV=-17515000, PMT=80625,FV= 18000000,) = 6.364%, which is higher than the note rate of 5.375%, and higher than the yield to the lender and a higher cost if the loan is held for its full 5 years.
- Spreading the fees over a shorter period increase the cost of the loan

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Effect of Prepayment Penalty

- Assume there is a 2% prepayment penalty to pay the loan off after 36 months. What is the yield to the lender and the cost to the borrower?
- Compared to the previous the only change is that the FV increases by 2%.
- Yield to Lender: I/YR(N=36, PV=-17640000, PMT=80625,FV= 18360000) = 6.717%
- Cost to borrower: I/YR(N=36, PV=-17515000, PMT=80625,FV= 18360000) = 6.974%
- Prepayment penalties increase the yield to lender and the cost to borrower

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FTLAPR

- Federal Truth in Lending Act requires disclosure of annual percentage rate (APR) on virtually all home mortgage loans
- FTLAPR: Yield to maturity, after adjusting for:
  - All loan finance charges
  - All compensation to (mortgage) originating brokers
  - All other charges controlled by lender
  - Premiums for any required insurance
- What inadequacy might you see in the FTLAPR as a measure of true borrowing cost?

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Implications of up front fees

- Borrowers who expect to move relatively soon should choose mortgages with few or no discount points & a slightly higher interest rate
- Borrowers who expect to keep the loan outstanding for a long period may consider paying discount points to **buy down** the interest rate by paying additional discount points

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Another example – Amortizing Loan

- You are taking a 5% interest rate, 30-year 80% LTV loan (i.e. 20% down payment) on a $250,000 house. You will pay 2 points to obtain this loan, and have 1500 in third party costs.
- What is your monthly payment?
- How much will you pay into interest in the fifth month of this loan?
- How much will you pay into interest in the fifth year of this loan?
- What will your loan balance be at the end of year 5?

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Another example – Amortizing Loan

- You are taking a 5% interest rate, 30-year 80% LTV loan (i.e. 20% down payment) on a $250,000 house. You will pay 2 points to obtain this loan, and have 1500 in third party costs.
- What is the yield to the lender if you keep the loan the entire term? What is the FTLAPR?
- What is the cost to the borrower if you keep the loan the entire term?
- What is the yield to the lender if you keep the loan for 5-years?
- What is the cost to the borrower if you keep the loan for 5-years

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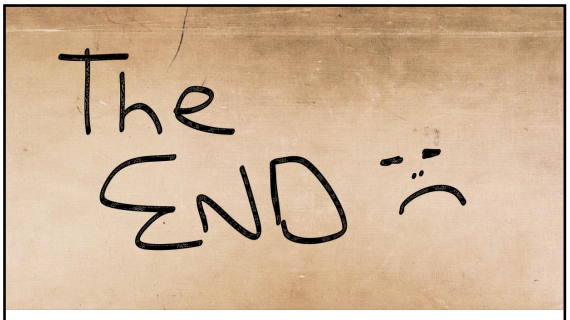

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