Personal Finance: Another Perspective`

Loans: Avoiding Consumer and Minimizing Mortgage

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Note: Graphs on this presentation are from
http://www.bankrate.com/funnel/graph/default.aspx?

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Objectives

A.   Understand the principles of effective consumer loans use

B.   Understand consumer loan types, characteristics, and costs

C.   Understand mortgage loan types, characteristics, and costs

C.   Understand the key relationships for borrowing

D.   Understand Consumer, Student and Mortgage Loan Plans and Strategies

Your Personal Financial Plan

IX. Student/Consumer Loans and Debt Reduction? (Loans and Debt Template LT01-08)

- What is your vision for consumer/student loans and debt outstanding?

- What are your goals and your current situation?

  - What is your current debt situation with interest rates, costs, and other fees?

- Action Plan:

  - What are your plans and strategies for consumer loans, student debt, and mortgage debt?

  - If in debt, what is your debt reduction strategy and views on future debt?

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Case Study

Data

- Anne is looking at the mortgage cost of a $300,000 6.0% fixed rate 30 year amortizing loan versus a 7.0% fixed rate 30 year loan with an 10 year interest only option.

Calculations

- A. What are her monthly payments for each loan for the first 10 years?

- B. What is her new monthly payment beginning in year 11 after the interest only period ends?

Application

- C. How much did Anne's monthly payment rise in year 11 in percentage terms for the interest only loan?

A. Understand the Principles of Effective Consumer Loans Use

- Why are consumer loans not recommended?
  - 1. They encourage consumption instead of saving
    - Rather than saving for the future, they encourage spending now
  - 2. They are very expensive, and crowd out saving
    - They reduce what you might otherwise have saved for your other goals
  - 3. They are generally unnecessary
    - Other than for education and a home (what the prophet has stated), they generally are not necessary!

Principles of Consumer Loans Use (continued)

- What 5 questions should you ask when you are thinking of borrowing for consumer loans?
    - 1. Do you really need to make this purchase?
    - 2. Is it in your budget and your financial plan?
    - 3. Can you pay for it without borrowing?
    - 4. What is the all-in cost of this loan, including its impact on your other goals?
    - 5. Will this purchase bring you closer or take you farther away from your personal goals?
        - Does this loan bring you closer to your goals, including your goal to be obedient to God's commandments?

Principles of Consumer Loans Use (continued)

- What are the principles of consumer loan use?
    - 1. Know yourself, your vision, goals and budget
    - 2. Seek, receive and act on the Spirit's guidance
    - 3. Know where you are financially (your assets, liabilities, spending and income)
    - 4. Resolve to not go into debt (except for a modest home and modest education)
    - 5. Pay as you go (live within your means)
- If in debt add:
    - 6. Prioritize your debts (if you cannot repay them all, give priority to secured debts for house or car)
    - 7. Develop a repayment plan (and automate it)
    - 8. Avoid all new debt (don't go further into debt)

Principles of Consumer Loans Use (continued)

Finding balance

Principles	Doctrines
• Know yourself, your vision and goals	Identity
• Seek, receive and act on guidance	Obedience
• Know where you are financially	Accountability
• No debt except for home and education	Agency
• Live within your means	Stewardship

Principles of Consumer Loans Use (continued)

From obedience to consecration

- I am a child of a King (identity), striving to live worthy of the Spirit (obedience), using my agency wisely (stewardship) as I follow the prophet and scriptures in deferring my wants (agency). I wait until I can pay cash for specific items (stewardship), so that I am a wiser steward over the things that I have been blessed with (stewardship) so I can accomplish my personal mission and individual and family vision and goals

B. Understand Consumer Loan Types, Characteristics, and Costs

- Types
  - Single payment loans
  - Installment loans
- Security
  - Secured
  - Unsecured
- Rates
  - Fixed
  - Variable
  - Convertible
  - Balloon

- Home Related
  - Home Equity
  - HELOC
- Specialty
  - Auto loans
  - Student loans
  - Payday loans

Characteristics of Consumer Loans

- Types
  - Single Payment
    - Loan is repaid in one payment of principle and interest
  - Installment
    - Loan is repaid in regular intervals with payments that include both principal and interest

Characteristics of Consumer Loans

- Security
  - Secured
    - Secured loans are guaranteed by a specific asset, i.e. a home or a car, and typically have lower rates
  - Unsecured
    - Unsecured loans require no collateral, are generally offered to only borrowers with excellent credit histories, and have higher rates of interest – 12% to 28% (and higher) annually

Secured versus Unsecured Loans
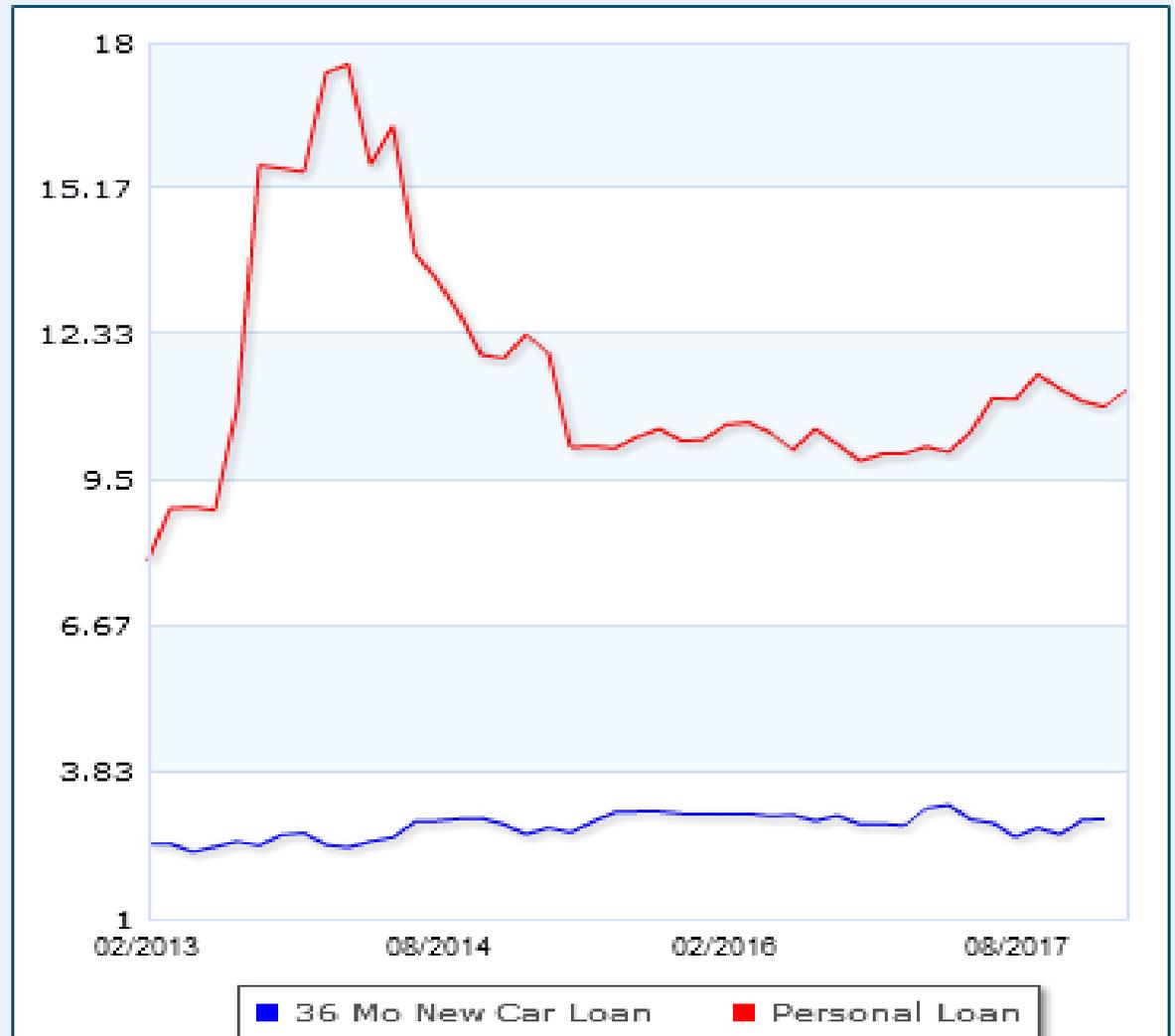
Consumer Loan Characteristics (continued)

- Rate Type
  - Fixed-rate loans
    - Same interest rate for the duration of the loan
      - Generally have a higher interest rate for lenders as could lose money if interest rates increase
  - Variable-rate loans
    - Interest rate is tied to an index plus some margin
      - Can adjust on different intervals such as monthly or annually, with a lifetime cap
  - Convertible loans
    - Begin as a variable-rate loan and can be locked into a fixed-rate loan at the then current interest rate at some predetermined future time

Home Equity Loans

- Home Related
  - Home equity loans
    - Second mortgages which use the equity in your home to secure your loan. Normally can borrow up to 80% of your equity in your home and rates are normally fixed
  - Home Equity Lines of Credit (HELOC)
    - A line of credit against your home equity which allows you to draw money from your home's value and pay it off with interest, with rates normally adjustable

Home Equity and HELOC Loans

Current home equity interest rates

3-month trends	Home equity loan	30K HELOC
9/26/2018	5.81%	6.03%
9/19/2018	5.73%	6.07%
9/12/2018	5.73%	6.08%
9/5/2018	5.77%	5.92%
8/29/2018	5.75%	6.19%
8/22/2018	5.74%	6.20%
8/15/2018	5.60%	5.72%
8/8/2018	5.73%	6.17%
8/1/2018	5.80%	6.15%
7/25/2018	5.79%	6.31%
7/18/2018	5.79%	6.24%
7/11/2018	5.78%	6.13%
7/3/2018	5.77%	6.11%

Consumer Loan Characteristics (continued)

- Specialty
  - Student loans
    - Loans to help offset the cost of an education, many with interest rates subsidized by the govt.
  - Auto loans
    - Loans secured by the vehicle the consumer is purchasing
  - Payday
    - Short-term loans of 1-2 week secured by a post-dated check—HUGE interest rates and fees

Student Loans
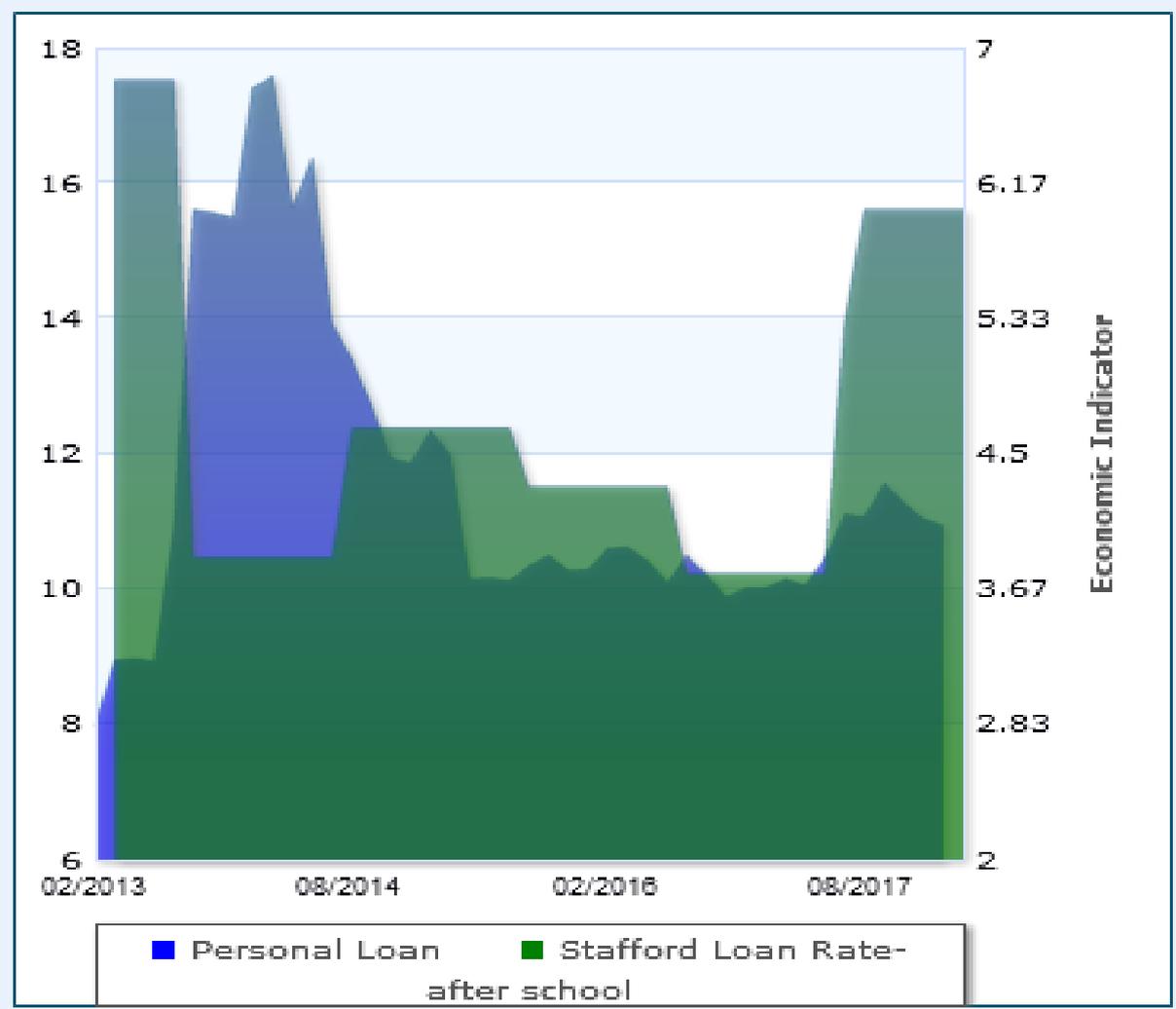
Auto Loans

Current auto loan interest rates

Dates	60-month new car	48-month new car	36-month used car
9/26/2018	4.79%	4.71%	5.37%
9/19/2018	4.80%	4.73%	5.36%
9/12/2018	4.79%	4.72%	5.36%
9/5/2018	4.76%	4.70%	5.29%
8/29/2018	4.80%	4.74%	5.34%
8/22/2018	4.82%	4.76%	5.34%
8/15/2018	4.83%	4.77%	5.35%
8/8/2018	4.43%	4.41%	5.35%
8/1/2018	4.85%	4.79%	5.38%
7/25/2018	4.83%	4.80%	5.38%
7/18/2018	4.83%	4.80%	5.38%
7/11/2018	4.80%	4.77%	5.34%
7/3/2018	4.78%	4.75%	5.33%

Costs of Consumer Loans

- What are the costs of consumer loans?
  - Consumer loans are required by Regulation Z of the Truth in Lending Act to state the loan APR in bold on the loan documents
    - The APR is the simple interest rate paid over the life of the loan. It takes into account all costs, including interest rate, cost of credit reports, and costs of all possible fees
    - Loans are either:
      - Single payment
      - Installment
      - Payday

Single Payment Loans

- Single payment (or balloon) loans
  - A loan that is repaid in only one payment, including interest
    - Generally is short-term lending of one year or less, sometimes called bridge or interim loans, often used until permanent financing can be arranged
    - Cost is simple interest
      - Both principal and interest are due at maturity, with interest is calculated as principal x interest rate x time

Installment Loans

- Installment loans
  - Installment loans are loans which are repaid at regular intervals and where payment includes both principal and interest
  - Cost is also Simple Interest
    - Most installment loans today are based on a simple-interest calculation (your calculator)
      - Repayment is on your outstanding balance, as each month the interest portion of the payment decreases and the principal portion increases

Payday Loans

- Payday Loans
  - Short-term loans of 1-2 weeks secured with a post-dated check which is "held" by the lender and then cashed later with huge rates APR > 520%
  - Cost is the APR
    - Interest plus fees divided by years and by average amount borrowed
      - To get the effective rate, take the APR of the loan in decimal form, divide it by the number of compounding periods, add 1, and take it to the power of the number of periods, and subtract 1

2018 Consumer Loan Comparisons
Updated October 2, 2018
MBA 620/Fin418/Fin200 Financial Planning

Loan:	Type:		Security:		Rate Type:			Home Related:		Specialty:		
	Single Payment	**Installment**	**Secured**	**Unsecured**	**Fixed Rate**	**Variable Rate**	**Convertible**	**Home Equity**	**HELOC**	**Student**	**Auto**	**Payday**
Description:	Loan paid off in one payment. It may also be a balloon or other loan used to finance a purchase until more permanent financing is available.	Loans that are repaid at regular intervals, i.e., each month. Payment includes interest for the period plus some principal, which increases each period	Loans that are secured by a tangible asset, such as a car or boat, that will be sold if the loan is not repaid. Because it is secured by the asset, interest rates are less.	Loans that are not secured by any asset and are based on the credit worthiness of the borrower.	Loans that maintain a constant interest rate for the entire term of the loan.	Loans that have an interest rate that is tied to an index and that can change depending on market conditions and a spread.	Loans in which the interest rate structure can change, from a fixed or variable rate loan to the opposite.	Second mortgages which use the equity in your home to secure the loan. Borrowers use these for consumer purchases	Loans secured by the equity in a home for a specific amount and term. Generally used like a credit card with a revolving line of credit.	Loans by students to pay for higher education costs and may have Federally subsidized interest rates. **AVOID PRIVATE EDUCATION LOANS**	Loans secured by the vehicle the consumer is purchasing. Because it is secured, interest rates are lower.	Short-term loans of 1-2 weeks secured by a post-dated check, and the worst kind of borrowing. **AVOID THESE LOANS LIKE THE PLAGUE**
Annual Percentage Rate (APR)	5-20% depending on where you borrow, your income and your credit	4-20% depending on where you borrow, your income and your credit	4-12% depending on the secured asset, your income and credit	12-25+% depending on who you borrow from, your income, loan use and your credit	4-20% depending on where you borrow, use of the proceeds and your credit	4-20% depending on where you borrow, use of the proceeds and your credit	4-20% depending on where you borrow, use of the proceeds and your credit	3-6% depending on equity in the home, your income and the your credit	3-6% depending on equity in the home, your income and the your credit	6.8% for subsidized loans, and 10-24% for unsubsidized loans depending on where you borrow	5-10% depending on the type of auto, who you borrow from, how long, and your income and credit	400-700% APR depending on your credit, income, where you borrow and for how long
Amount owed doubles every "x" Years (at highest rate)	Doubles every 3.5 years	Doubles every 3.5 years	Doubles every 6 years	Doubles every 3 years	Doubles every 3.5 years	Doubles every 3.5 years	Doubles every 3.5 years	Doubles every 12 years	Doubles every 12 years	Doubles every 10 years	Doubles every 7 years	Doubles every 1 month
Rate Type:	Variable or Fixed	Generally Fixed	Variable or Fixed, generally installment	Variable or Fixed, generally installment	Fixed Rate, can be either installment or single payment	Variable Rate, can be either installment or single payment	Variable or Fixed, generally installment	Variable or Fixed, generally installment	Variable or Fixed, generally installment	Fixed for subsidized and fixed or variable for unsubsidized, installment	Variable or Fixed, generally installment	Fixed, single payment
Cost Calculation:	[(Interest + fees)/years]/avg. borrowed	Amortization table	Amortization table	Amortization table	Can be either installment or single payment	Can be either installment or single payment	Can be either installment or single payment	Amortization table	Amortization table	Amortization table	Amortization table	[(Interest + fees)/years] / avg. borrowed

Questions

- Any questions on consumer loans and costs?

C. Understand Mortgage Loan types, Characteristics and Costs

- There are a number of different loan options when considering how to finance your house. Your choice of loans should be based on three areas:

  - 1. *Your time horizon*: How long do you expect to have the mortgage, and how certain are you of that time horizon?

  - 2. *Your preference (if any) for low required payments*: How important are lower payments in the initial years of the loan?

  - 3. *Your tolerance for interest rate risk*: Are you willing to assume interest rate risk?

  - 4. *Your work status/history*: Are you or have you been a member of the armed forces?

Mortgage Loans (continued)

- Types of Loans
  - Conventional loans: neither insured or guaranteed
    - They are below the maximum amount set by Fannie Mae and Freddy Mac of $424,100 in 2018 (single family)
    - They require Private Mortgage Insurance (PMI) if the down payment is less than 20%
      - PMI is insurance to make the lender whole should the borrower fail to make payments
      - Borrowers can eliminate PMI by having equity greater than 20%

Mortgage Loans (continued)

- Jumbo loans
  - Loans in excess of the conventional loan limits and the maximum eligible for purchase by the two Federal Agencies, Fannie Mae and Freddy Mac, of $424,100 in 2018 (some areas have higher amounts)
  - Some lenders also use the term to refer to programs for even larger loans, e.g., loans in excess of $500,000

Mortgage Loans (continued)

- Piggyback loans
  - Two separate loans, one for 80% of the value of the home and one for 20%
    - The second loan has a higher interest rate due to its higher risk
  - The second loan is used to eliminate the need for PM Insurance
    - With a piggyback loan, PMI is not needed

Mortgage Loans (continued)

- There are a number of different types of mortgage loans available. These include:
  - Fixed rate mortgages (FRMs)
  - Variable or adjustable rate mortgages (ARMs)
  - Variable or Fixed Interest Only Option (IO)
  - Option Adjustable Rate Mortgages (Option ARMs)
  - Negative Amortization (NegAm)
  - Balloon Mortgages
  - Reverse Mortgage
  - Special Loans: VA or FHA

Mortgage Loans (continued)

- Fixed rate mortgages (FRMs)
  - Mortgage loans with a fixed rate of interest for the life of the loan, and least risky from the borrowers point of view
  - Benefits
    - Higher monthly payments, so a greater percent of payments are going to pay down principle
    - Interest rate risk is transferred to the lender
    - No risk of negative amortization
  - Risks
    - Interest rates are higher as lenders must be compensated for increased interest rate risk

Fixed Rate Mortgages

Today's Mortgage Interest Rates

3-month trend	30-year fixed rate	15-year fixed rate	5/1 ARM	30-year jumbo
9/26/2018	4.92%	4.29%	4.35%	4.85%
9/19/2018	4.88%	4.28%	4.27%	4.82%
9/12/2018	4.78%	4.21%	4.20%	4.72%
9/5/2018	4.71%	4.16%	4.14%	4.65%
8/29/2018	4.69%	4.12%	4.18%	4.65%
8/22/2018	4.66%	4.11%	4.12%	4.63%
8/8/2018	4.73%	4.19%	4.17%	4.70%
8/01/2018	4.75%	4.20%	4.20%	4.68%
7/25/2018	4.71%	4.15%	4.15%	4.66%

Mortgage Loans (continued)

- Variable or Adjustable Rate Mortgages (ARMs)
  - Mortgage loans with a rate of interest that is pegged to a index that changes periodically, plus
  - Benefits
    - Lower interest rates are beneficial to the borrower
    - Lower monthly payments, as interest rate risk is assumed by the borrower
  - Risks
    - Somewhat lower monthly payments initially as lenders will accept lower rates as borrows assume interest rate risk
    - Possible "payments shock" as interest rates rise, perhaps beyond what borrowers are able to pay

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Variable Rate Mortgages (ARMs)

Mortgage Rate Trends Over Time
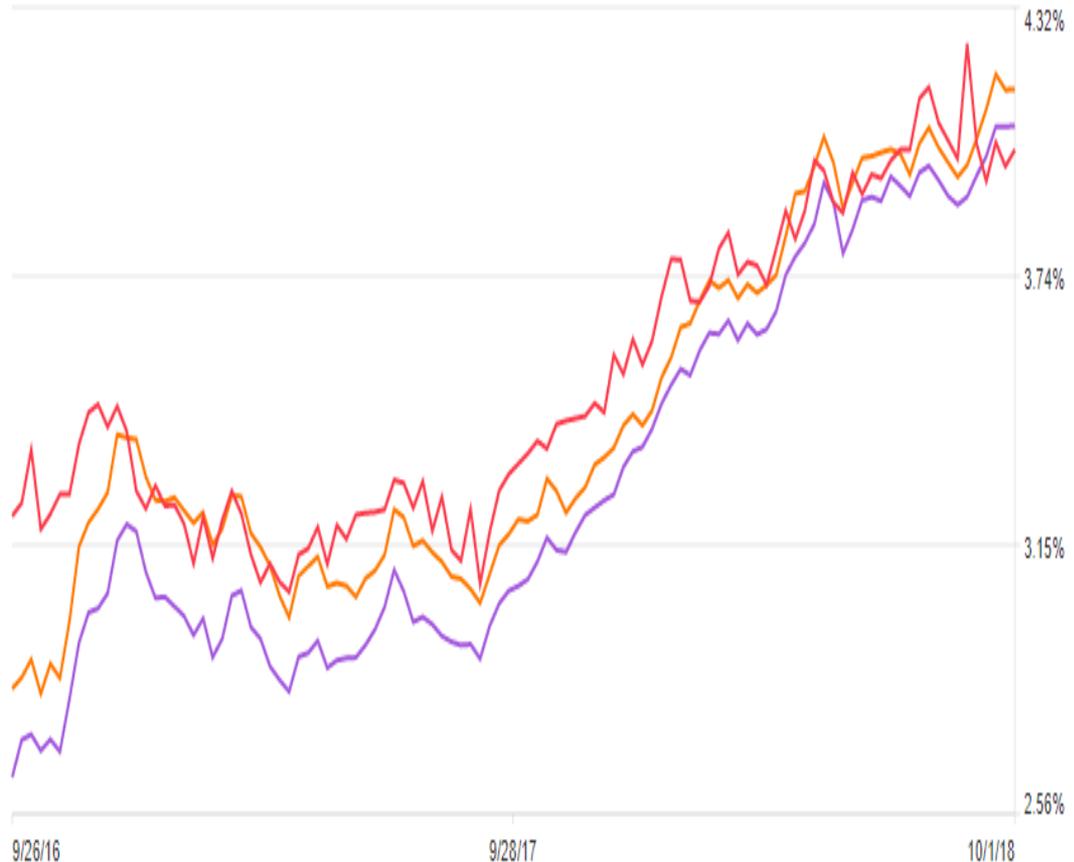
Mortgage Loans (continued)

- Fixed/Variable Loan with Interest only option
  - FRMs or ARMs with an option for interest only payments for a number of years, and then payments reset to amortize loan over the remaining years – generally not recommended
  - Benefits
    - Lower monthly payments and greater flexibility
    - Borrowers can afford more house
  - Risks
    - Once interest-only period passes, payment resets, and the payment increase can be large
    - A rise in payments when interest period ends

Interest Only Loans

Mortgage Loans (continued)

- Option Adjustable Rate Mortgages (Option ARMs)
  - ARM where rates adjust monthly, and payments annually, with "options" on the payment amount: minimum, interest only, and fully amortizing -- never recommended!!!!!
  - Benefits
    - Lower monthly payments and greater flexibility
  - Risks
    - The minimum payment option often results in a growing loan balance, termed negative amortization, which has limits and will cause loan to be reset
    - A huge payments rise when interest period ends

Mortgage Loans (continued)

- Negative Amortization Mortgages (NegAm)
  - Mortgage loans in which scheduled monthly payments are insufficient to amortize, or pay off the loan.
  - Benefits
    - Lower payments
  - Risks
    - Interest expense that has been incurred, but not paid, is added to the principal amount, which increases the amount of the debt.
    - NegAm loans have a maximum negative amortization that is allowed. Once that limit is hit, rates adjust automatically

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Mortgage Loans (continued)

- Balloon Mortgages
    - Mortgage loans whose interest and principal payment won't result in the loan being paid in full at the end of the term.
  - Benefits
    - Allow smaller interest payments
    - These loans are often used when the debtor expects to refinance the loan closer to maturity
  - Risks
    - The final balloon payment can be huge
    - You may not be able to refinance at a rate you would like

Mortgage Loans (continued)

- Reverse Mortgages
  - Mortgage loans whose proceeds are made available against the homeowners equity.
    - Financial institutions in essence purchase the home and allow the seller the option to stay in the home until they die
  - Benefits
    - Used by cash-poor but home-rich homeowners who need to access the equity in their homes to supplement their monthly income at retirement
  - Risks
    - Once they die, the home is sold and the loan repaid, generally with the proceeds

Mortgage Loans (continued)

- Federal Housing Administration (FHA) Insured Loans
  - FHA does not originate any loans, but insures the loans issued by others based on income and other qualifications
  - Benefits
    - There is lower PMI insurance, but it is required for the entire life of the loan (1.5% of the loan)
  - Risks
    - While the required down payment is very low, the maximum amount that can be borrowed is also low

FHA Loans
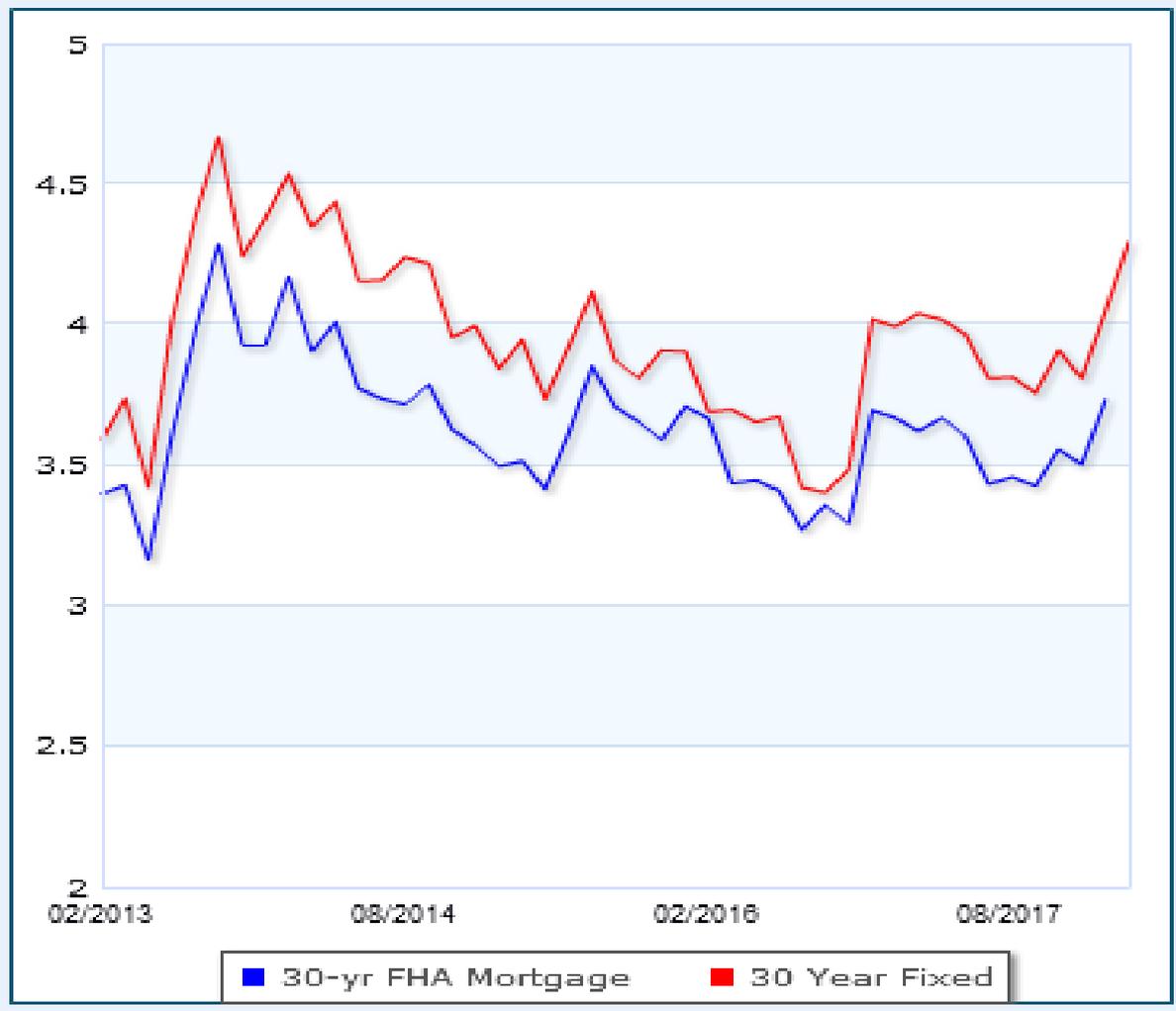
Mortgage Loans (continued)

- Veterans Administration (VA) Guaranteed Loans
  - These loans are issued by others and guaranteed by the Veterans Administration
  - Benefits
    - Are only for ex-servicemen and women as well as those on active duty
    - Loans may be for 100% of the home value
  - Risks
    - With not down payment, the risk remains of owing more than the house is work

VA Loans

2018 Mortgage Loan Comparisons
Updated October 2, 2018
MBA 620/Fin418/Fin200 Financial Planning

Loan:	Traditional:		ARM Specific:		Interest Only Options:		Specialty Loans:		
	Fixed	**Adjustable Rate Mortgage (ARM)**	**3/1 Arm**	**5/1 ARM**	**Fixed Rate**	**3/1 or 7/1 ARM**	**FHA**	**VA**	**Option ARM**
Description:	Mortgage loans with a fixed rate of interest for the life of the loan; these are the least risky from the borrowers point of view, as the lender assumes the major interest rate risk above the loan rate; these are the most-recommended option	Mortgage loans with a rate pegged to a specific index that changes periodically plus a margin set for the life of the loan; generally the interest rate is lower compared to a fixed rate loan, as the borrower assumes more of the interest rate risk	An ARM loan with a fixed rate teaser; the loan interest is fixed for the first 3 years, then readjusts annually afterwards consistent with the index and margin	An ARM loan with a fixed rate teaser; the loan interest is fixed for the first 5 years, then readjusts annually afterwards consistent with the index and margin	A FRM with an option that allows interest only payments for a certain number of years, and then payments are reset to amortize the entire loan over the remaining years.	An ARM with an option that allows interest only payments for a certain number of years, and then payments are reset to amortize the entire loan over the remaining years	These loans are insured, but not issued, by the Federal Housing Administration. It has a lower required down payment, and because it is insured, a lower rate	These loans are guaranteed, but not issued, by the Veterans Administration. It has a lower required down payment, and because it is guaranteed, a lower interest rate	An ARM where interest rates adjust monthly, and payments annually, with "options" on the payment amount; the minimum payment often results in negative amortization, which has a specific maximum. Once reached, payments are automatically increased
Benefits	Higher monthly payments, so a greater percent of payments are going to pay down principle; no risk of negative amortization; and interest rate risk is transferred to the lender	Interest rates vary with national interest rates; lower interest rates and payments, as the borrower assumes in interest rate risk	Interest rates vary with national interest rates; lower interest rates and payments, as the borrower assumes interest rate risk. Teaser fixed rates limit initial interest rate rises and assumes you sell before fixed rate expires	Interest rates vary with national interest rates; lower interest rates and payments, as the borrower assumes interest rate risk. Teaser fixed rates limit initial interest rate rises and assumes you sell before fixed rate expires	Lower monthly payments and greater flexibility; may be helpful if have better use for money elsewhere; borrowers can afford more house, and may move before the payments increase	Lower monthly payments and greater flexibility; may be helpful if have better use for money elsewhere; borrowers can afford more house, and may move before the payments increase	Lower interest rates and lower down payments make this an ideal loan for first-time home buyers if the house price is not too high	Lower interest rates and zero down payment make this an ideal loan for veterans and ex-service personnel	Lower monthly payments and greater flexibility initially; helpful if have better use for money elsewhere; and borrowers can afford more house, and may move before the payments increase
Risks:	Interest rates are higher as lenders must be compensated for increased interest rate risk; higher monthly payments may make it difficult to make payments, particularly for those not on a regular salary	Possible "payments shock" as interest rates rise; borrowers assume interest rate risk which can be substantial in a period, like now, of rising interest rates	Possible "payments shock" as interest rates rise; while fixed period offers some respite, borrowers assume interest rate risk which can be substantial in a period, like now, of rising interest rates	Possible "payments shock" as interest rates rise; while fixed period offers some respite, borrowers assume interest rate risk which can be substantial in a period, like now, of rising interest rates	Major "payments shock" as loan resets after interest only period. Now borrowers must pay back both principle and interest in a shorter period, substantially increasing principle and interest payments	Major "payments shock" as loan resets after interest only period. Now borrowers must pay back both principle and interest in a shorter period, substantially increasing principle and interest payments	While the down payment is low, the amount borrowed is also low. In addition, while the PM insurance is less, it is required for the entire life of the loan (1.5%)	While the down payment is zero, the amount to borrow is also low.	Significant payment shocks occur when the loan resets from the option period to the fully conforming period. DO NOT GET THIS TYPE OF LOAN (luckily they have all been outlawed due to their bad publicity)
Private Mortgage Insurance (PMI)	PMI typically required if down payment is less than 20%	PMI typically required if down payment is less than 20%	PMI typically required if down payment is less than 20%	PMI typically required if down payment is less than 20%	PMI typically required if down payment is less than 20%	PMI typically required if down payment is less than 20%	Upfront and monthly PMI is required	None required; but a VA funding fee is required	PMI typically required if down payment is less than 20%
Cost Calculation:	Amortization table	Amortization table	Amortization table	Amortization table	Amortization table	Amortization table	Amortization table	Amortization table	Amortization table

Questions

- Any questions on types of mortgage loans?

D. Understand Key Relationships and How to Reduce Borrowing Costs

- Key to your plans and strategies is reducing your costs

- 1. Understand the Key Relationships on Borrowing:
  - Total interest cost is related to the interest rate
    - Keep your interest rate as low as possible
  - Total interest cost is inversely related to maturity
    - Keep your loan maturity short
  - Periodic payment is directly related to both the maturity and interest rate
    - Keep both short
  - Parents are cheaper than banks

Relationships and Borrowing Costs (continued)

- 2. Understand the key clauses for Consumer and Mortgage Loans—none are in your favor!
  - Note that all clauses are in the lender's favor, and very few, if any, are in the borrower's favor.
    - You are putting your future in someone else's hands when you borrow!
    - You are committing future earnings to today's consumption!
    - Know what your are doing before you do it!!!!!
    - Read the documents very carefully and understand them before you sign!!!

Relationships and Borrowing Costs (continued)

- Insurance agreement clause
  - Requires you to purchase life insurance that will payoff your loan in case you die before the loan is paid off
    - Benefits only the lender, and increases your total loan cost
- Acceleration clause
  - Requires the entire loan to be paid-in-full if you miss just one payment
    - Normally (but not always) this is not invoked if you make a good faith effort to pay

Relationships and Borrowing Costs (continued)

- Deficiency payments clause
  - Requires any amount in excess to be paid if the collateral's value does not satisfy the loan.
    - Borrower must also pay any outstanding charges incurred by the lender associated with the disposal of the collateral
- Recourse clause
  - Defines the lender's ability to collect any outstanding balance via wage attachments and garnishments
    - Can also include liens on other borrower's property

Relationships and Borrowing Costs (continued)

- Least expensive
  - Borrowing from parents and family
  - Home equity loans
  - Other secured loans
- More expensive
  - Credit unions
  - Savings and loans
  - Commercial banks

- Most expensive
- Credit cards
- Retail stores
- Finance companies and payday lenders
  - Isn't it interesting that those who are in the worst financial situation have to pay the most for credit

Relationships and Borrowing Costs (continued)

- 3. Know the steps to reduce borrowing costs
  - a. Don't get into debt in the first place!
    - Follow the prophet—rather than your wants!
      - Distinguish between true needs and wants
    - Remember your goals
      - Remember ignorance, carelessness, compulsiveness, pride, and necessity are offset by knowledge, exactness, discipline, humility, and self reliance
    - Stick to your budget
      - If you really need it, plan and save for it

Relationships and Borrowing Costs (continued)

- b. Compare the after-tax cost of borrowing with the after-tax lost return from using savings
  - It makes little sense to borrow at a high interest rate when you have savings earning a lower rate. The formula is:
    - After-tax lost return = nominal interest rate * (1 – tax rate)
    - Tax rate = Federal + State + Local marginal tax rates
  - Be careful though, to not put your house at risk!

Relationships and Borrowing Costs (continued)

- c. Maintain a strong credit rating
    - Increase your credit score
        - Make sure your credit reports have no mistakes
        - Pay all your bills on-time
        - Keep balances low, particularly on revolving debt
        - Keep your oldest accounts, but not too many
        - Don't apply for too many new cards
        - Don't have too many of the same type of cards
        - Call and increase your credit limits (if possible)

Relationships and Borrowing Costs (continued)

- d. Reduce the lender's risk
  - a. Use a variable rate loan
  - b. Keep the loan term as short as possible
  - c. Provide collateral for the loan
  - d. Pay a large down payment on the item to be purchased with financing

D. Consumer, Student and Mortgage Loan Plans and Strategies

- We have already discussed your Consumer Loans and Debt Plan earlier

  - However, we can add a few more thoughts

Plans and Strategies (continued)

- Plans and Strategies – Consumer Loans
  - We will separate needs from wants
  - We defer all wants until we can pay cash for them
  - We pay cash for all consumer purchases
  - We will pay off all credit cards monthly
  - We keep our emergency fund at 3 months and rebuild it quickly once it is drawn down
  - We will never buy toys with debt

Plans and Strategies (continued)

- Plans and Strategies – Student Loans
  - We will seek scholarships as much as possible
  - We will spend loan money only on education
  - We defer all wants until we can pay cash for them and after we have paid off our student loans
  - We will understand our employment options to help pay off our student loan debt
  - We build our emergency fund to 3 months and then use the 20%+ to pay down non-subsidized and then subsidized loans
  - We will not buy toys until our student loans are all paid off

Plans and Strategies (continued)

- Plans and Strategies – Mortgage Loans
  - We strive to have a 20% down payment to reduce the need for PMI
  - We ensure all housing payments are within the front- and back-end ratios recommended
  - We avoid debt like the plague
  - We keep our emergency fund at 3 months and rebuild it quickly when it is drawn down
  - We defer all wants until we can pay cash for them, except for student and mortgage loans
  - We will not borrow against the equity in our home
  - We will go into retirement out of mortgage debt

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Review of Objectives

A. Do you understand the principles of effective consumer loan use?

B. Are you aware of the characteristics of consumer loans and how to calculate costs?

C. Are you aware of the characteristics of mortgage loans and how to calculate costs?

D. Do you know the least expensive types of loans and how to reduce the cost of those loans?

Case Study #1

Data

- Anne is looking at the mortgage cost of a $300,000 1. traditional fixed rate 6.0%, 30 year amortizing loan versus 2. a fixed rate 7.0%, 30 year loan with an 10 year interest only option.

Calculations

- A. What are her monthly payments for each loan for the first 10 years?

- B. What is her new monthly payment beginning in year 11 after the interest only period ends?

Application

- C. How much did Anne's monthly payment rise in year 11 in percentage terms for the interest only loan?

Case Study #1 Answers

- A. Anne's monthly payments are
  - Traditional: The amortizing loan payment is:

    PV=-300,000, I=6.0%, P/Y=12, n=360, PMT = ?

    - PMT = $1,798.65
  - Interest only: The payment would be $300,000 * 7.0% / 12 = ?
  - $1,750.00
- B. After the 10 year interest only period, her new payment would be (she would have to amortize the 30 year loan over 20 years):
  - PV = -300,000, I=7.0%, P/Y=12, N= 240, PMT = ?
    - PMT = $2,325.89
- C. The new payment is a 33% increase

Case Study #2

Data

- Matt is offered a $1,000 single payment loan for 1 year at an interest rate of 12%. He determines there is a mandatory $20 loan processing fee, $20 credit check fee, and $60 insurance fee. The calculation for determining the APR is (annual interest + fees) / average amount borrowed.

Calculations

- A. What is Matt's APR for the 1 year loan assuming principle and interest paid at maturity?
- B. What is Matt's APR if this was a 2 year loan assuming principle and interest paid at maturity?

Case Study #2 Answers

- Matt's interest cost is calculated as principle x interest rate x time.
  - A. The APR for the 1 year loan is:
    - Interest = $1,000 * .12 * 1 year = $120
    - Fees are $20 + $20 + $60 = $100
      - His APR is (120 + 100) / 1,000 = 22.0%
  - B. The APR for the 2 year loan is:
    - Interest = $1,000 * .12 * 2 years = $240
    - Fees are $20 + $20 + $60 = $100
    - His APR is [(240 + 100) / 2] / 1,000 = 17.0%
      - Since this is a single payment loan, the average amount borrowed is the same over both years.
    - Note that Matt's APR is significantly higher than his stated interest rate. He should be very careful if taking out this loan.

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Case Study #3

Data

- Matt has other options with the same $1,000 loan at 12% for 2 years. But now he wants to pay it back over 24 months and he has no other fees.

Calculations

- Using the simple interest and monthly payments calculate:

  - A. The monthly payments
  - B. The total interest paid
  - C. The APR of this loan

- Note: The simple interest method for installment loans is simply using your calculator's loan amortization function

Case Study #3 Answers

- A. To solve for simple interest monthly payments, set your calculator to monthly payments, end mode:
  - PV = -1,000 , I = 12%, P/Y = 12, N = 24, PMT=?
    - PMT = $47.074
- B. The Total Interest Paid = 47.074 x 24 – 1,000 = ?
    - $129.76
- C. To calculate the APR, it is [(interest + fees) / 2] / average amount borrowed (which changes each year as you pay it down). (See the following slide to see how to get the average amount borrowed of $540.68.)
  - ($129.76 / 2 years) / $540.68 = 12%

Calculated rate using Excel "Rate" Function:				12.000%
Amount	1,000	**Stated Interest**	12%	
P/Y	12	**Payment**	$47.07	
Years	2	PMT = from loan calculator		
Amount Received:		1,000		**Remaining**
Amount	**Payment**	**Interest**	**Principle**	**Principle**
1,000.00	$47.07	10.00	$37.07	$962.93
$962.93	$47.07	9.63	$37.44	$925.48
$925.48	$47.07	9.25	$37.82	$887.66
$887.66	$47.07	8.88	$38.20	$849.47
$849.47	$47.07	8.49	$38.58	$810.89
$810.89	$47.07	8.11	$38.96	$771.92
$771.92	$47.07	7.72	$39.35	$732.57
$732.57	$47.07	7.33	$39.75	$692.82
$692.82	$47.07	6.93	$40.15	$652.68
$652.68	$47.07	6.53	$40.55	$612.13
$612.13	$47.07	6.12	$40.95	$571.18
$571.18	$47.07	5.71	$41.36	$529.82
$529.82	$47.07	5.30	$41.78	$488.04
$488.04	$47.07	4.88	$42.19	$445.85
$445.85	$47.07	4.46	$42.62	$403.23
$403.23	$47.07	4.03	$43.04	$360.19
$360.19	$47.07	3.60	$43.47	$316.72
$316.72	$47.07	3.17	$43.91	$272.81
$272.81	$47.07	2.73	$44.35	$228.47
$228.47	$47.07	2.28	$44.79	$183.68
$183.68	$47.07	1.84	$45.24	$138.44
$138.44	$47.07	1.38	$45.69	$92.75
$92.75	$47.07	0.93	$46.15	$46.61
$46.61	$47.07	0.47	$46.61	$0.00
$540.68	**Total Int.=**	**129.76**	**Actual APR =**	**12.0%**

Case Study #4

Data

- You are looking to finance a used car for $9,000 for three years at 12% interest.

Calculations

- A. What are your monthly payments?
- B. How much will you pay in interest over the life of the loan?
- C. What percent of the value of the car did you pay in interest?

Case Study #4 Answers

- A. To solve for your monthly payments, set:
  - PV= -9,000, I = 12, N=36, and solve for PMT=?
    - Your payment is $298.93 per month

B. To get your total interest paid, multiply your payment * 36 months = $10,761.44 – 9,000 = ?

- $1,761.46

C. To determine what percent of the car you paid in interest, divide interest by the cars cost of $9,000

= $1,761.46 / 9,000 = 19.6%

- You paid nearly 1/5 the value of the car in interest.

Case Study #5

Data

- Bill is short on cash for a date this weekend. He found he can give a post-dated check to a Payday lender who will give him $100 now for a $125 check which the lender can cash in 2 weeks. The APR is the total fees divided by the annual amount borrowed. The effective annual rate = $(1 + APR/periods)^{periods} - 1$.

Calculations

- A. What is the APR?
- B. What is the effective annual interest rate?

Application

- C. Should he take out the loan?

Case Study #5 Answers

- A. the APR is the amount paid on an annual basis divided by the average amount you borrow
  - APR = ($25 * 26 two-week periods)/$100 = ?
  - APR = 650%
- B. To solve for your Effective Annual Interest rate, put it into the equation for determining the impact of compounding.
  - The effective annual interest rate is
    - $(1 +[\ 6.5/26\ periods])^{26\ periods} - 1 =$
    - Effective rate is 32,987%
      - This is a very expensive loan
- C. No. It is just too expensive

Case Study #6

Data

- Wayne is concerned about his variable rate mortgage (ARM). Assuming a period of rapidly rising interest rates, how much could his rate increase over the next 4 years if he had a 6 percent variable rate mortgage with a 2 percent annual cap (that he hits each year) and a 6 percent lifetime cap?

Application

- How would this affect his monthly payments?

Case Study #6 Answers

- Assuming rates increased by the maximum 2% each year, at the end of the 4 years it could have reached its cap of 6%, giving a 12 percent rate. Nearly doubling the interest rate would significantly increase Wayne's monthly payment.

Case Study #7

Data

- Jon took out a $300,000, 30 year Option ARM mortgage for purchasing his home, which had a 7% mortgage. Each month he could make a minimum payment of $1,317 (which didn't even cover interest), an interest only payment of $1,750, a payment of $1,996 that included both principle and interest, or an additional amount. The loan had a negative amortization maximum of 125% of the value of the loan. Jon was not very financially savvy, and for the first 10 years made the minimum payment only. As a result, at the end of year 10, he was notified that he had hit the negative amortization maximum and that his loan had reset.

Calculations

- A. What is Jon's new monthly payment beginning in year 11 after he hit the negative amortization limit?

- B. How much did Jon's monthly payment rise over the minimum payment he was paying previously?

Case Study #7 Answers

- A. After the negative amortization limit is hit, he must now amortize the loan over 20 years, instead of 30.
  - His new loan amount is not $300,000, but $375,000 (300,000 * 125%) :
  - PV = -375,000, I=7.0%, P/Y=12, N= 240, PMT = ?
    - PMT = $2,907.37

- B. His minimum payment was $1,317, and his new payment is $2,907.
  - It is a 121% increase over the minimum payment period.

Notes

- Other good sources of information on mortgages are available at:
  - www.mtgprofessor.com
  - www.bankrate.com