***Financial Markets and Institutions, 7e* (Saunders)**

**Chapter 7 Mortgage Markets**

1) The largest category of mortgages by dollar volume is commercial mortgages.

Answer: FALSE

Difficulty: 1 Easy

Topic: Mortgage Markets and Mortgage-Backed Securities: Chapter Overview; Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-01 Distinguish between a mortgage and a mortgage-backed security.; 07-02 Describe the main types of mortgages issued by financial institutions.

Accessibility: Keyboard Navigation

2) The process of mortgage securitization results in a separation between mortgage origination and mortgage financing.

Answer: TRUE

Difficulty: 1 Easy

Topic: Secondary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-06 Define a mortgage sale.

Accessibility: Keyboard Navigation

3) A subprime mortgage is a mortgage made to a borrower who has a below normal credit rating.

Answer: TRUE

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-05 Describe some of the new innovations in mortgage financing.

Accessibility: Keyboard Navigation

4) Federally insured mortgages are called conventional mortgages.

Answer: FALSE

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

5) Private mortgage insurance (and hence, that part of the homeowner's monthly payment) is automatically removed from a mortgage when the loan-to-value ratio on the mortgage falls below 80 percent.

Answer: FALSE

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

6) A borrower using a conventional mortgage will have to put up at least a 20 percent down payment or purchase private mortgage insurance.

Answer: TRUE

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

7) Discount points are paid to reduce the down payment required.

Answer: FALSE

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

8) On a fixed-rate mortgage the dollars of interest the homeowner pays falls each year the mortgage is outstanding.

Answer: TRUE

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

9) A large portion of the mortgage payment goes towards the principal, during the early life of a mortgage loan.

Answer: FALSE

Difficulty: 2 Medium

Topic: Mortgage amortization

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

10) Subprime mortgage borrowers usually have poorer credit ratings or lower income levels compared to conventional mortgage borrowers.

Answer: TRUE

Difficulty: 1 Easy

Topic: Other types of mortgages

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-05 Describe some of the new innovations in mortgage financing.

Accessibility: Keyboard Navigation

11) Pass through mortgage securities are for primary market investors.

Answer: FALSE

Difficulty: 2 Medium

Topic: Pass-through securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

12) GNMA role is to provide insurance to pass through mortgage securities.

Answer: TRUE

Difficulty: 2 Medium

Topic: Pass-through securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

13) Risk attributes of collateralized mortgage obligations differ based on tranches.

Answer: TRUE

Difficulty: 2 Medium

Topic: Collateralized mortgage obligation

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation

14) In synthetic securitization, the transfer of risk on a pool of assets is achieved by the use of credit derivatives or guarantees to a third party.

Answer: TRUE

Difficulty: 1 Easy

Topic: International trends in securitization

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-10 Describe the trends in the international securitization of mortgages.

Accessibility: Keyboard Navigation

15) For CMOs, prepayment risk is the risk that a borrower may prepay the mortgage before maturity when interest rates decrease.

Answer: TRUE

Difficulty: 2 Medium

Topic: Collateralized mortgage obligation

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation

16) Rank the following types of mortgages by amount outstanding from largest to smallest.

I. Home mortgages

II. Multifamily mortgages

III. Farm mortgages

IV. Commercial mortgages

A) I, II, III, IV

B) I, II, IV, III

C) II, I, IV, III

D) IV, II, III, I

E) I, IV, II, III

Answer: E

Difficulty: 2 Medium

Topic: Mortgage Markets and Mortgage-Backed Securities: Chapter Overview; Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-01 Distinguish between a mortgage and a mortgage-backed security.; 07-02 Describe the main types of mortgages issued by financial institutions.

Accessibility: Keyboard Navigation

17) The process of packaging and/or selling mortgages that are then used to back publicly traded debt securities is called

A) collateralization.

B) securitization.

C) market capitalization.

D) stock diversification.

E) mortgage globalization.

Answer: B

Difficulty: 1 Easy

Topic: Secondary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-06 Define a mortgage sale.

Accessibility: Keyboard Navigation

18) A \_\_\_\_\_\_\_\_ placed against mortgaged property ensures that the property cannot be sold (except by the lender) until the mortgage is paid off.

A) collateral

B) lien

C) writ of habeas corpus

D) down payment

E) writ of certiorari

Answer: B

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

19) If a borrower makes a 20 percent down payment on a conventional mortgage, she will be required to obtain

A) FHA insurance.

B) VA insurance.

C) private mortgage insurance.

D) GNMA payment guarantees

E) None of these choices are correct.

Answer: E

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

20) Mortgage payments are \_\_\_\_\_\_\_\_ on a 15-year fixed-rate mortgage than on a 30-year fixed-rate mortgage, and \_\_\_\_\_\_\_\_ is paid on a 15-year mortgage than on a 30-year mortgage; ceteris paribus.

A) lower; less interest

B) lower; less principal

C) higher; less interest

D) higher; more principal

E) higher; more interest

Answer: C

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.; 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

21) With a fixed-rate mortgage, the \_\_\_\_\_\_\_\_ bears the interest rate risk and with an ARM the \_\_\_\_\_\_\_\_ bears the interest rate risk.

A) borrower; lender

B) borrower; borrower

C) lender; lender

D) lender; borrower

E) federal government; pool organizer

Answer: D

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

22) The schedule showing how monthly mortgage payments are split into principal and interest is called a(n)

A) securitization schedule.

B) balloon payment schedule.

C) graduated payment schedule.

D) amortization schedule.

E) growing equity schedule.

Answer: D

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

23) You purchase a $255,000 house and you pay 20 percent down. You obtain a fixed-rate mortgage where the annual interest rate is 5.85 percent and there are 360 monthly payments. What is the monthly payment?

A) $1,215.27

B) $1,203.48

C) $1,194.45

D) $1,367.22

E) $1,504.35

Answer: B

Explanation: 0.80 × $255,000 = Pmt × PVIFA (0.0585/12, 360 months); Pmt = 1,203.48

Calculator Solution:

Amount borrowed is 0.8 × $255,000 = 204,000

PV = 204,000

N = 360

FV = 0

I = 5.85/12 = 0.4875

Solve for PMT to get $1,203.48.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

24) You obtain a $265,000, 15-year fixed-rate mortgage. The annual interest rate is 6.25 percent. In addition to the principal and interest paid, you must pay $275 a month into an escrow account for insurance and taxes. What is the total monthly payment (to the nearest dollar)?

A) $2,272

B) $1,632

C) $2,547

D) $1,907

E) $2,311

Answer: C

Explanation: 265,000 = [Pmt × PVIFA (0.0625/12, 180 months)] + 275 = 2,547

Calculator Solution:

PV = 265,000

N = 180

FV = 0

I = 6.25/12 = 0.52083

Solve for PMT to get $2,272.17; the total monthly payment will be 2,272.17 + 275 = $2,547.17.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

25) You purchase a $325,000 town home and you pay 25 percent down. You obtain a 30-year fixed-rate mortgage with an annual interest rate of 5.75 percent. After five years you refinance the mortgage for 25 years at a 5.1 percent annual interest rate. After you refinance, what is the new monthly payment (to the nearest dollar)?

A) $1,422

B) $1,401

C) $1,366

D) $1,335

E) $1,296

Answer: D

Explanation: 0.75 × $325,000 = Pmt × PVIFA (0.0575/12, 360 months); Balance after five years = $226,107.8; New Pmt = 226,107.8/PVIFA (0.051/12,300) = $1,335.01

Calculator Solution:

PV = 243,750

N = 360

FV = 0

I = 5.75/12 = 0.47917

Solve for PMT to get $1,422.45; in the amortization schedule of the financial calculator, use P1 = 1 and P2 = 60 to find the balance at the end of the 5th year, which is $226,107.83

The refinanced mortgage will be:

PV = 226,107.83

N = 300

FV = 0

I = 5.1/12 = 0.425

Solve for PMT to get $1,335.01.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

26) A borrower took out a 30-year fixed-rate mortgage of $2,250,000 at a 7.2 percent annual rate. After five years, he wishes to pay off the remaining balance. Interest rates have by then fallen to 7 percent. How much must he pay to retire the mortgage (to the nearest dollar)?

A) $2,122,426

B) $2,225,330

C) $2,015,678

D) $2,212,041

E) $1,999,998

Answer: A

Explanation: $2,250,000 = Pmt × PVIFA (0.072/12, 360 months); Pmt = $15,272.73; New Balance = $15,272.73 × PVIFA (0.072/12, 300 months) = $2,122,425.62

Calculator Solution:

PV = 2,250,000

N = 360

FV = 0

I = 7.2/12 = 0.6

Solve for PMT to get $15,272.73; in the amortization schedule of the financial calculator, use P1 = 1 and P2 = 60 to find the balance at the end of the 5th year, which is $2,122,425.62.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

27) A home buyer bought a house for $245,000. The buyer paid 20 percent down but decided to finance closing costs of 3 percent of the mortgage amount. If the borrower took out a 30-year fixed-rate mortgage at a 5 percent annual interest rate, how much interest will the borrower pay over the life of the mortgage?

A) $224,655

B) $180,622

C) $228,477

D) $188,265

E) $248,575

Answer: D

Explanation: 0.80 × 245,000 × 1.03 = Pmt × PVIFA (0.05/12, 360 months); Pmt = $1,083.74; Total interest = (360 × 1,083.74) – (0.80 × 245,000 × 1.03) = $188,265

Calculator Solution:

Amount borrowed is 0.8 × $245,000 = 196,000

Points to be financed 0.03 × 196,000 = 5,880

PV = 201,880

N = 360

FV = 0

I = 5/12 = 0.4167

Solve for PMT to get $1,083.74; in the amortization schedule of the financial calculator, use P1 = 1 and P2 = 360 to find the total interest paid for this loan, which is $188,264.78.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.; 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

28) A homeowner could take out a 15-year mortgage at a 5.5 percent annual rate on a $195,000 mortgage amount, or she could finance the purchase with a 30-year mortgage at a 6.1 percent annual rate. How much total interest over the entire mortgage period could she save by financing her home with the 15-year mortgage (to the nearest dollar)?

A) $230,408

B) $190,105

C) $155,612

D) $144,325

E) $138,612

Answer: E

Explanation: 195,000 = Pmt × PVIFA (0.055/12, 180 months); Pmt of 1,593.31 × 180 = 91,796; 195,000 = Pmt × PVIFA (0.061/12, 360 months); Pmt of 1,181.69 × 360 = 230,408; 230,408 − 91,796 = 138,612

Calculator Solution:

First find the total interest on the 30-year mortgage:

PV = 195,000

N = 360

FV = 0

I = 6.1/12 = 0.5083

Solve for PMT to get $1,181.69; in the amortization schedule of the financial calculator, use P1 = 1 and P2 = 360 to find the total interest paid for this loan, which is $230,408.34.

Next find the total interest on the 15-year mortgage:

PV = 195,000

N = 180

FV = 0

I = 5.5/12 = 0.4583

Solve for PMT to get $1,593.31; in the amortization schedule of the financial calculator, use P1 = 1 and P2 = 180 to find the total interest paid for this loan, which is $91,796.29.

The amount of interest saved is: $230,408.34 − $91,796.29 = $138,612.05.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

29) A homeowner can obtain a $250,000, 30-year fixed-rate mortgage at a rate of 6.0 percent with zero points or at a rate of 5.5 percent with 2.25 points.

If you will keep the mortgage for 30 years, what is the net present value of paying the points (to the nearest dollar)?

A) $9,475

B) $8,360

C) $7,564

D) $7,222

E) $6,578

Answer: B

Explanation: No Points: Pmt = $250,000/PVIFA (0.06/12, 360 months); Pmt = 1,498.88; Pay Points: Pmt = $250,000/PVIFA (0.055/12, 360 months); Pmt = 1,419.47; Pmt savings = 1,498.88 − 1,419.47 = 79.40; NPV of points: [79.40 × PVIFA (0.055/12, 360 months)] − (0.0225 × 250,000) = 8,360

Calculator Solution:

The amount of points to be paid is 0.0225 × 250,000 = 5,625.

First find the difference in the payments for mortgage without points and with points:

Without points

PV = 250,000

N = 360

FV = 0

I = 6.0/12 = 0.5

Solve for PMT to get $1,498.88.

With points

PV = 250,000

N = 360

FV = 0

I = 5.5/12 = 0.45833

Solve for PMT to get $1,419.47.

The difference is savings of $79.41 over 30 years with monthly payments. Find the Present value of this annuity stream:

PMT = 79.41

N = 360

FV = 0

I = 5.5/12 = 0.45833

Solve for PV = 13,985.83.

Finally, the difference between this savings and the points paid is 13,985.83 − 5,625 = $8,360.83.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

30) A homeowner can obtain a $250,000, 30-year fixed-rate mortgage at a rate of 6.0 percent with zero points or at a rate of 5.5 percent with 2.25 points.

How long must the owner stay in the house to make it worthwhile to pay the points if the payment saving is invested monthly?

A) 7.15 years

B) 3.33 years

C) 6.04 years

D) 5.90 years

E) More than 30 years

Answer: A

Explanation: $5,625 points cost = $79.40 payment savings × PVIFA (0.055/12, N); N = 85.85 months/12 = 7.15 years

Calculator Solution:

PV = − 5,625

PMT = 79.41

I = 5.5/12 = 0.45833

FV = 0

Solving for N you get 85.84 months which is 7.15 years.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

31) A homeowner can obtain a $250,000, 30-year fixed-rate mortgage at a rate of 6.0 percent with zero points or at a rate of 5.5 percent with 2.25 points.

How long must the owner stay in the house to make it worthwhile to pay the points if the payment saving is not invested?

A) 7.15 years

B) 3.33 years

C) 6.04 years

D) 5.90 years

E) More than 30 years

Answer: D

Explanation: $5,625 points cost/79.40 payment savings = N = 70.84 months/12 = 5.90 years

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

32) The least used form of mortgage securitization is the \_\_\_\_\_\_\_\_.

A) second mortgage

B) mortgage-backed bond

C) mortgage pass-through

D) CMO

E) home equity loan

Answer: B

Difficulty: 2 Medium

Topic: Secondary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.; 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation

33) You want to buy a $250,000 house and you will use a conventional mortgage. What is the minimum down payment you have to make to avoid having to purchase mortgage insurance?

A) $10,000

B) $20,000

C) $30,000

D) $40,000

E) $50,000

Answer: E

Explanation: 20% of 250,000 is $50,000

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

34) The FHA charges the homeowner \_\_\_\_\_\_\_\_ to insure an FHA mortgage.

A) nothing

B) 0.5 percent of the loan amount

C) $500

D) 1 percent of the loan amount

E) $1,500

Answer: B

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

35) A(n) \_\_\_\_\_\_\_\_ is used to help retired people receive monthly income in exchange for the equity in their home.

A) SAM

B) Equity Participation Mortgage

C) RAM

D) PLAM

E) GEM

Answer: C

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-05 Describe some of the new innovations in mortgage financing.

Accessibility: Keyboard Navigation

36) Which of the following statements about mortgage markets is/are true?

I. Mortgage companies service more mortgages than they originate.

II. Servicing fees typically range from 2 percent to 4 percent.

III. Most mortgage sales are with recourse.

IV. The government is involved in the residential mortgage markets.

A) I, III, and IV only

B) II, III, and IV only

C) I, II, and IV only

D) II and III only

E) I and IV only

Answer: E

Difficulty: 2 Medium

Topic: Secondary Mortgage Market; Participants in the Mortgage Markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-06 Define a mortgage sale.; 07-07 Define a pass-through security.; 07-09 List the major mortgage holders in the United States.

Accessibility: Keyboard Navigation

37) Which of the following statements about GNMA is/are true?

I. GNMA provides timing insurance.

II. GNMA creates pools of mortgages and issues securities.

III. GNMA insures only FHA, VA, HUD's Office of Indian and Public Housing, and USDA Rural Development loans.

IV. GNMA requires that all mortgages in the pool have the same interest rate.

A) I, II, III, and IV are true.

B) I, III, and IV only

C) I, II, and III only

D) II, III, and IV only

E) III and IV only

Answer: B

Difficulty: 2 Medium

Topic: Secondary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

38) A $25,000 face value GNMA pass-through quote sheet lists a spread to average life of 103, PSA of 220, and a price of 101-09. This means that

I. the pass-through yield is 103 basis points above the comparable maturity Treasury bond.

II. the pass-through is being prepaid more quickly than standard PSA.

III. the pass-through is priced at $25,272.50.

A) I, II, and III are correct.

B) I and II only

C) I and III only

D) II and III only

E) III only

Answer: B

Difficulty: 3 Hard

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

39) Mortgage fees paid by the homeowner at, or prior to, closing upon the purchase of a house typically include all but which one of the following?

A) Application fee

B) Title search fee

C) Title insurance fee

D) Appraisal fee

E) Prepayment penalty

Answer: E

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

40) An MBB differs from a CMO or a pass-through in that

I. the MBB does not result in the removal of mortgages from the balance sheet.

II. a MBB holder has no prepayment risk.

III. cash flows on a MBB are not directly passed through from mortgages.

A) I, II, and III

B) I and II only

C) II and III only

D) I and III only

E) I only

Answer: A

Difficulty: 3 Hard

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation

41) One fixed-rate mortgage pool has a 750 PSA and a second fixed-rate pool has 150 PSA. The pool with the higher PSA \_\_\_\_\_\_\_\_ than the pool with the lower PSA.

I. probably has a higher coupon

II. probably has lower default risk

III. will mature more quickly

A) I, II, and III

B) I and II only

C) II and III only

D) I and III only

E) I only

Answer: D

Difficulty: 3 Hard

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

42) As compared to fixed-rate mortgages, ARMs result in which of the following for the lender?

I. Higher interest rate risk

II. Lower default risk

III. Greater prepayment penalty fees

A) I, II, and III

B) I and II only

C) II and III only

D) I and III only

E) None of these choices are correct.

Answer: E

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

43) Which one of the following types of mortgages is likely to become more popular as the average age of the U.S. population increases?

A) GEM

B) GPM

C) SAM

D) PLA

E) RAM

Answer: E

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-05 Describe some of the new innovations in mortgage financing.

Accessibility: Keyboard Navigation

44) Which one of the following entities is an actual government-owned enterprise dealing with mortgages?

A) GNMA

B) FNMA

C) FHLMC

D) PIP

E) CMO

Answer: A

Difficulty: 1 Easy

Topic: Secondary Mortgage Market

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

45) A fixed-rate mortgage originator is adversely affected by \_\_\_\_\_\_\_\_ interest rates while the borrower is adversely affected by \_\_\_\_\_\_\_\_ interest rates.

A) increasing; decreasing

B) increasing; increasing

C) decreasing; decreasing

D) decreasing; increasing

E) stable; decreasing

Answer: A

Difficulty: 3 Hard

Topic: Mortgage characteristics

Bloom's: Apply

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

46) An adjustable rate mortgage originator is adversely affected by \_\_\_\_\_\_\_\_ interest rates while the borrower is adversely affected by \_\_\_\_\_\_\_\_ interest rates.

A) increasing; decreasing

B) increasing; increasing

C) decreasing; decreasing

D) decreasing; increasing

E) stable; decreasing

Answer: D

Difficulty: 3 Hard

Topic: Mortgage characteristics

Bloom's: Apply

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

47) The borrower of an amortized mortgage makes most of the payment during the early life of the mortgage:

A) towards the principal.

B) towards the interest.

C) equally towards the principal and interest.

D) mostly towards the principal rather than interest.

E) None of these choices are correct.

Answer: B

Difficulty: 2 Medium

Topic: Mortgage amortization

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

48) A Collateralized mortgage obligation (CMO) has:

A) no interest rate risk.

B) no default risk.

C) no prepayment risk.

D) high degree of interest rate risk.

E) no default, no prepayment and no interest rate risks.

Answer: D

Difficulty: 2 Medium

Topic: Collateralized mortgage obligation

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation

49) If the current interest environment is low, lenders tend to prefer \_\_\_\_\_\_\_\_ ; while borrowers tend to prefer \_\_\_\_\_\_\_\_.

A) ARM; fixed-rate mortgage

B) ARM; ARM

C) fixed-rate mortgage; fixed-rate mortgage

D) fixed-rate mortgage; ARM

E) None of these choices are correct.

Answer: A

Difficulty: 3 Hard

Topic: Mortgage characteristics

Bloom's: Apply

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

50) Construct an amortization schedule for the first three months and the final three months of payments for a 30-year, 7 percent mortgage in the amount of $90,000. What percentage of the third payment is principal? What percentage of the final payment is principal? What do these differences imply? (Hint: The balance after the 357th payment is $1,775.56.)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | Amortization Table: | | | | | | | | | | | | | | | | | | | |
| # |  |  | | Payment | | | Interest | | |  | | Principal | | | |  | | Balance | | |  | |
| 0 |  |  | |  |  |  |  |  |  | |  | |  |  |  | |  | | $ | 90,000.00 | |  | |
| 1 |  |  | | $ | 598.77 |  | $ | 525.00 |  | |  | | $ | 73.77 |  | |  | | $ | 89,926.23 | |  | |
| 2 |  |  | | $ | 598.77 |  | $ | 524.57 |  | |  | | $ | 74.20 |  | |  | | $ | 89,852.03 | |  | |
| 3 |  |  | | $ | 598.77 |  | $ | 524.14 |  | |  | | $ | 74.64 |  | |  | | $ | 89,777.39 | |  | |
| ... |  |  | |  |  |  |  |  |  | |  | |  |  |  | |  | |  |  | |  | |
| 358 |  |  | | $ | 598.77 |  | $ | 10.36 |  | |  | | $ | 588.41 |  | |  | | $ | 1,187.15 | |  | |
| 359 |  |  | | $ | 598.77 |  | $ | 6.93 |  | |  | | $ | 591.85 |  | |  | | $ | 595.30 | |  | |
| 360 |  |  | | $ | 598.77 |  | $ | 3.47 |  | |  | | $ | 595.30 |  | |  | | $ | 0.00 | |  | |

Answer: 12.46 percent of the third payment is principal and 99.42 percent of the last payment is principal. In a long-term amortized loan, the early payments are almost entirely interest, and the borrower's equity position grows only slowly at first, but, over time, more and more of the payment goes to principal.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

51) Why do mortgage lenders prefer ARMs while many borrowers prefer fixed-rate mortgages, ceteris paribus.

Answer: With an ARM the homeowner bears the interest rate risk (not totally, because the ARM is capped). From the lender's perspective, if deposit rates change, hopefully the ARM rate will change and the lender's net profit will remain about the same. If deposit rates rise, the homeowner's payments are also likely to rise, preserving at least some of the institution's profit margin. With a fixed-rate mortgage the homeowner bears no out of pocket interest rate risk, but the lender's profit margin will normally fall if rates rise, as their fund's cost will rise but mortgage income stays the same.

Difficulty: 1 Easy

Topic: Primary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.

Accessibility: Keyboard Navigation

52) A homeowner is looking to buy a home in Marvin Gardens. The most he can afford to pay in total is $1,800 per month. Yearly property taxes will be about $3,000 (escrowed monthly) and insurance is $110 per month. There are no other costs.

If mortgage rates are 6.25 percent for a 30-year fixed-rate mortgage, how large can his mortgage be?

Answer: Max monthly payment = $1,800 − $3,000/12 − $110 = $1,440

PV = $1,440 × PVIFA (6.25/12,360) = $233,874

Calculator Solution:

PMT = 1,440

N = 360

FV = 0

I = 6.25/12 = 0.5208

Solve for PV = 233,873.60.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

53) A homeowner is looking to buy a home in Marvin Gardens. The most he can afford to pay in total is $1,800 per month. Yearly property taxes will be about $3,000 (escrowed monthly) and insurance is $110 per month. There are no other costs.

If his parents give him $20,000 for a down payment, what is the most he can pay for a house with a 15-year mortgage if the interest rate is 5.50 percent?

Answer: Max monthly payment = $1,800 − $3,000/12 − $110 = $1,440

PV = $1,440 × PVIFA (5.50/12,180) = $176,237 + $20,000 = $196,237

Calculator Solution:

PMT = 1,440

N = 180

FV = 0

I = 5.5/12 = 0.4583

Solve for PV = 176,236.59 and add the 20,000 down payment to get $196,236.59.

Difficulty: 2 Medium

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

54) What three major ways has the federal government assisted the mortgage markets? Explain.

Answer:

1. By providing insurance for homeowners. This assists resale and securitization of mortgages because secondary buyers don't have to engage in credit analysis of homeowners.

2. By sponsoring or creating pools of mortgages for securitization. This provides a national source of funds to all regions of the economy.

3. By directly providing mortgage credit.

Difficulty: 2 Medium

Topic: Primary Mortgage Market; Secondary Mortgage Market; Participants in the Mortgage Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-03 Identify the major characteristics of a mortgage.; 07-07 Define a pass-through security.; 07-09 List the major mortgage holders in the United States.

Accessibility: Keyboard Navigation

55) Why have FNMA and Freddie Mac, considered government-sponsored enterprises (GSEs), been in the news lately? Explain.

Answer: In the early 2000s, the agencies were in the news for excessive interest rate risk caused by large derivatives positions, for overcharging lenders for services provided, and for accounting irregularities designed to smooth earnings and/or generate bonuses for employees. Former Fed Chairman Greenspan has also stated that these institutions were a source of risk for the economy because of their ties to government and their extensive use of debt to finance growth. FNMA and FHLMC (or Freddie Mac) have also become embroiled in the subprime mortgage crisis. In 2007 the value of their mortgage assets fell sharply. Shut out of the equity capital markets, FNMA and Freddie Mac were still able to recapitalize by borrowing at favorable rates in public debt markets (because of their quasi-government status [i.e., government-sponsored enterprise (GSE)], they had low perceived credit risk). Even so, because of their inability to raise needed capital in the public *equity* markets, their long-term viability remained a question. Finally, in September of 2008, the Federal Housing Finance Agency (FHFA), newly created by the Housing and Economic Recovery Act of 2008, placed FNMA and FHLMC into conservatorship, which effectively handed over operational control to the FHFA. Dividends were suspended and both GSEs were delisted from the NYSE. The conservatorship will end only when the FHFA finds that the GSEs are safe and solvent.

Improvements in the U.S. economy and the housing market have resulted in improved performance for both Fannie Mae and Freddie Mac. By August 2017 the companies' stocks were trading at $2.70 and $2.61, respectively, up from $0.97 to $0.98 at the beginning 2016. The two GSEs have repaid substantial amounts of the loans from the U.S.Treasury and are expected to remain profitable.

Difficulty: 3 Hard

Topic: Secondary Mortgage Market

Bloom's: Understand; Remember

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

56) Who are the major buyers of mortgages after they have been originated? What is the difference between selling with recourse or without recourse? Which is most common?

Answer: The major buyers are:

1. investment banks.

2. vulture funds.

3. domestic banks.

4. foreign banks.

5. insurance companies.

6. pension funds.

7. closed-end bank loan mutual funds.

8. nonfinancial corporations.

Selling with recourse means the buyer of the mortgage can require the mortgage seller to repay the mortgage if the homeowner defaults. A sale without recourse means the seller has no legal liability in the event the homeowner defaults. Most sales are without recourse.

Difficulty: 2 Medium

Topic: Secondary Mortgage Market; Participants in the Mortgage Markets

Bloom's: Understand; Remember

AACSB: Reflective Thinking

Learning Goal: 07-06 Define a mortgage sale.; 07-09 List the major mortgage holders in the United States.

Accessibility: Keyboard Navigation

57) How does GNMA improve mortgage marketability?

Answer: GNMA sponsors pools of FHA- or VA-insured mortgages and provides timing insurance to investors (ensures the timely receipt of promised cash flows in the event of homeowner default). GNMA allows private pool organizers to issue securities backed by the mortgage pool that bear GNMA's name. The GNMA name tells investors there is no credit risk and that the securities are actively traded.

Difficulty: 2 Medium

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

58) Explain each term of the following pass-through quote:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 year | Price |  | Avg Life | | | PSA | | |
| FMAC Gold 7.0% | 97-31 |  |  | 5.9 |  |  | 150 |  | |

Answer: FMAC Gold 7.0 percent: a pass-through issued by Freddie Mac; maximum payment delay is 55 days. The coupon rate is 7 percent.

97-31 price on pass-through (paid monthly) is 97.9875 percent of par.

5.9 years average life of security based on prepayment patterns.

PSA 150 means that the mortgage holders are prepaying at a rate 50 percent faster than the benchmark prepayment rate (PSA = 100).

Difficulty: 3 Hard

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-07 Define a pass-through security.

Accessibility: Keyboard Navigation

59) You bought your house five years ago and you believe you will be in the house only about five more years before it gets too small for your family. Your original home value when you bought it was $250,000, you paid 20 percent down, and you financed closing costs equal to 3 percent of the mortgage amount. The mortgage was a 30-year fixed-rate mortgage with a 6.5 percent annual interest rate. Rates on 30-year mortgages are now at 5 percent if you pay 2 points. Your refinancing costs will be 1.5 percent of the new mortgage amount (excluding points). You won't finance the points and closing costs this time. A new down payment is not required. Should you refinance? Ignore all taxes and show your work.

Answer: Find the original payment and then find what you owe now:

0.80 × 250,000 × 1.03 = Pmt × PVIFA (6.5/12,360); Pmt = $1,302.06

Balance now = $1,302.06 × PVIFA(6.5/12,300); Balance now = $192,838.61

New payment if refinance

$192,838.61 = Pmt × PVIFA (5/12,360); Pmt = $1,035.2

Pmt savings = $1,302.06 − $1,035.2 = $266.86 per month

Refinancing costs = (2% + 1.5%) × $192,838.61 = $6,749.35

Find breakeven time:

$6,749.35 = $266.86 × PVIFA (5/12, N); N = 26.78 months ≈ 27 months/12 ≈ 2.25 years. You plan on being in the house for five more years, so it is worthwhile to refinance.

Calculator Solution:

PV = 206,000

I = 6.5/12 = 0.5417

N = 360

FV = 0

Solve for PMT to get 1,302.06; using P1 = 1 and P2 = 60, find the balance left on this loan which is 192,838.61.

The new loan will have a payment of:

PV = 192,838.61

I = 5/12 = 0.4167

N = 360

FV = 0

Solve for the PMT to get 1,035.20.

So the savings on monthly payments will be 1,302.06 − 1,035.20 = 266.86.

The refinancing costs on the new mortgage will be 0.035 × 192,838.61 = 6,749.35. If you will leave in this house only 5 more years, find whether $6,749.35 is worth paying today.

Solve for the number of years required to recover this $6,749.35 cost today:

PV = − 6,749.35

I = 5/12 = 0.4167

PMT = 266.86

FV = 0

Solve for N to get 26.78 months which is equivalent to 2.23 years which is less than the 5 years period you intend to stay in the house, so it is worth refinancing.

Difficulty: 3 Hard

Topic: Primary Mortgage Market

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 07-04 Examine how a mortgage amortization schedule is determined.

Accessibility: Keyboard Navigation

60) Why were CMOs created?

Answer: Some investors desired more protection from prepayment risk than offered by pass-throughs. The creation of different payment tranches in a CMO allows investors to better tailor their prepayment risk exposure.

Difficulty: 2 Medium

Topic: Secondary Mortgage Market

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 07-08 Define a collateralized mortgage obligation.

Accessibility: Keyboard Navigation