

ANSWERS TO STUDY QUESTIONS

Chapter 16

- 16.1. Residential properties are secured by owner-occupied single-family homes, whereas commercial properties are secured by income-producing property.
- 16.3. The commercial properties tend to be unique and require relatively large loans for financing. Thus, there is a lack of mass production or standardization in such a market, relatively speaking, which lends itself to more custom crafted and negotiated mortgages.
- 16.5. Banks and thrifts have liabilities that are of short duration (depositors can remove their money largely on demand). They need to match these short-term liabilities with short-term assets, such as construction loans. Life insurance companies and pension funds tend to have liabilities of much longer duration (based on life insurance policies and pension benefit obligations), often with a high degree of predictability in their future cash outflow requirements. Such institutions need to match these long-term liabilities with stable and dependable long-term cash inflows, such as permanent mortgages can provide.
- 16.7. Non-recourse mortgage loans are secured by collateral, but for which the borrower is not personally liable. For instance, if the borrower defaults, the lender can seize the collateral or property but the lender cannot come after borrower's other assets in order to recover any amount not recovered from a foreclosure.
- 16.9. a. Assuming \$1 million in costs will be subtracted from the foreclosure sale of \$9 million, Bob will receive \$7.5 million, Sue will receive \$500,000, and Piet will receive nothing.
 b. Since Sue is on the margin regarding whether she will receive her full principal or not, it is likely that Sue will bring the foreclosure suit.
 c. If Sue's mortgage has a subordination clause in it, then in the answer to a., Bob will still receive \$7.5 million but now Piet will get \$500,000 and Sue will not get anything. In this new situation, Piet is on the margin of whether he receives his full principal or not, it is now more likely that Piet will bring the foreclosure suit.
- 16.11. The "Redeem Up, Foreclose Down" process is described in section 16.2.2.
- 16.13. Since the loan had a joint-and-several-liability clause and it is a recourse loan, both Bob and Piet are personally responsible for paying the debt back. Assuming \$1 million in costs are subtracted from the foreclosure sale, the leftover balance that these two would be responsible for is \$3 million (\$10 million loan – \$7 million after-cost sale price). Given a 50/50 joint venture, each would need to pay \$1.5 million. Thus, Bob's net worth after foreclosure would be \$8.5 million (\$10 million – \$1.5 million) and Piet's net worth would be 50 cents less than negative \$1.5 million.
- 16.15. In the absence of a due-on-sale clause, the lender will not generally be able to effectively block assumption of the loan by a new buyer of the property. Such an assumption can be valuable for both the original borrower and the new buyer of the property if interest rates have risen since the time the loan was issued. In effect, it enables the purchaser of the property to obtain a below-market-interest-rate loan, which should enable the seller of the property to sell it for a higher-than-market price.
- 16.17. We would expect a lender to demand a higher interest rate on a loan with an exculpatory clause because there is greater risk of not recovering the full balance on the loan when the borrower is not personally responsible for the debt.

- 16.19. Lenders prefer to resolve problems without recourse to litigious actions, if possible, thereby saving legal expenses and retaining more flexibility to deal with the borrower in a less formal, less adversarial, and often more expeditious manner.
- 16.21. The specifics of the workout processes are laid out in the section on workouts (section 16.4.3).
- 16.23. The borrower benefits because a deed-in-lieu is not as public and does not stain the borrower's reputation as much as a formal foreclosure.
- 16.25. Strategic default refers to the borrower deliberately defaulting on the loan for the purpose of forcing the lender into a workout to the borrower's advantage, even though the collateral property is generating sufficient income to service the debt and has a current market value likely in excess of the outstanding loan balance. In the presence of limited liability and costs of foreclosure, strategic default can work in the interests of the borrower. The details of this can be read in section 16.5.2 where scenario II serves as an example of a strategic default.
- 16.27. Expected return = $6\% + 1\% = 7\%$. Expected cash flows = $(0.7)10,600,000 + (0.2)9,800,000 + (0.1)9,000,000 = 10,280,000$. Loan value = $\$10,280,000 / (1.07) = \$9,607,477$. The loan's nominal yield would be $(\$10,600,000 - \$9,607,477) / \$9,607,477 = 10.33\%$. The cost of the credit risk is the difference between the PV of a U.S. government bond of equivalent future cash flow, and the PV of the subject loan. The government bond would sell for $10,600,000 / 1.06 = \$10,000,000$, so the cost of the credit risk is $10,000,000 - \$9,607,477 = \$392,523$, or 3.92% of an equivalent riskless loan's value.