

CHAPTER 8

CONCEPT REVIEW QUESTIONS

1. What characteristics does management desire in a capital budgeting technique? Why?

Other things being equal, managers would prefer (1) an easily applied technique that (2) consider cash flow, (3) recognizes the time value of money, (4) fully accounts for expected risk and return, and (5) when applied leads to higher stock prices.

2. Why might managers focus on the effect that an investment will have on reported earnings rather than on the investment's cash flow consequences?

Earnings or earnings per share are widely reported in the business press and companies (and management) are penalized if they earn less than expected. Because of this emphasis, managers tend to be very focused on earnings, sometimes incorrectly at the expense of cash flow.

3. What factors determine whether the annual *accounting rate of return* on a given project will be high or low in the early years of the investment's life? In the latter years?

Depreciation method can be a big factor. Accelerated depreciation can mean substantially lower cash flows in the early years of a project.

4. What factors account for the popularity of the *payback method*? In what situations is it often used as the primary decision-making technique? Why?

Payback is popular because it is very easy to compute and to understand and because it gives managers a rough measure of how soon they will receive intermediate cash flows from a project that they could potentially invest in other projects

5. What are the major flaws of the *payback period* and *discounted payback* approaches?

The major flaws of the payback and discounted payback methods are that they do not take the time value of money into account and they ignore cash flows beyond the payback period.

6. What does it mean if a project has an *NPV* of €1 million?

An NPV of \$1million means that €1 million in shareholder value (market capitalization) is being added to the firm.

7. Why might the discount rates used to calculate the *NPVs* of two competing projects differ at a given point in time?

The discount rate reflects the risk of a project. It is possible for a project to have more risk at its beginning and less as managers become more familiar with project operations.

8. Describe how the *IRR* and *NPV* approaches are related.

IRR and NPV are related in that both use the time value of money and take risk into account. NPV accounts for risk by using a risk-adjusted discount rate, while IRR uses a risk-adjusted hurdle rate against which to compare the project and make the accept/reject decision.

9. If the *IRR* for a given project exceeds a firm's hurdle rate, does that mean that the project necessarily has a positive *NPV*? Explain.

Yes, for a single project with conventional cash flows, if *IRR* says accept the project, *NPV* will also say accept the project. If a project has two *IRRs*, this says the project is positive *NPV* whenever the hurdle rate lies between the two *IRRs*

10. Describe the "scale problem" and the "timing problem" and explain the potential effects of these problems on the choice of mutually exclusive projects, using *IRR* versus *NPV*.

You can use *IRR* with mutually exclusive projects by subtracting one set of cash flows from the other and finding the *IRR* of the project that represents these differential cash flows. If the differential project has conventional cash flows, then accept the project on top if the *IRR* exceeds the hurdle rate. If the differential project has non-conventional cash flows, then accept the project on the top of the subtraction if the hurdle rate exceeds the *IRR*

11. How are the *NPV*, *IRR*, and *PI* approaches related?

All three methods are related because they adjust for the time value of money and risk. Again, for a single project with conventional cash flows, all three methods will provide the same accept/reject decision.

12. What important flaw do both the *IRR* and *PI* share? Explain.

Choosing a project with the highest *PI* may not be the same as accepting a project with the highest dollar *NPV*. To maximize shareholder wealth, a manager wants to add the most possible risk-adjusted (positive *NPV*) dollars to the company.