

Reading 35: Capital Budgeting

Question #1 of 56

Question ID: 414736

If a project has a negative cash flow during its life or at the end of its life, the project *most likely* has:

- A) a negative internal rate of return.
- B) more than one internal rate of return.
- C) multiple net present values.

Question #2 of 56

Question ID: 414739

The NPV profile is a graphical representation of the change in net present value relative to a change in the:

- A) prime rate.
- B) internal rate of return.
- C) discount rate.

Question #3 of 56

Question ID: 414695

Which of the following steps is *least likely* to be an administrative step in the capital budgeting process?

- A) Conducting a post-audit to identify errors in the forecasting process.
- B) Forecasting cash flows and analyzing project profitability.
- C) Arranging financing for capital projects.

Question #4 of 56

Question ID: 414725

Which of the following projects would have multiple internal rates of return (IRRs)? The cost of capital for all projects is 9.75%.

Cash Flows	Blackjack	Roulette	Keno
T ₀	-10,000	-12,000	-8,000
T ₁	10,000	7,000	4,000
T ₂	15,000	2,000	0
T ₃	-10,000	2,000	6,000

- A) Projects Roulette and Keno.
- B) Project Blackjack only.

C) Projects Blackjack and Keno.

Question #5 of 56

Question ID: 414734

If the calculated net present value (NPV) is negative, which of the following must be CORRECT. The discount rate used is:

- A) less than the internal rate of return (IRR).
 - B) equal to the internal rate of return (IRR).
 - C) greater than the internal rate of return (IRR).
-

Question #6 of 56

Question ID: 434325

An analyst has gathered the following data about a company with a 12% cost of capital:

	Project P	Project Q
Cost	\$15,000	\$25,000
Life	5 years	5 years
Cash inflows	\$5,000/year	\$7,500/year

If Projects P and Q are mutually exclusive, what should the company do?

- A) Accept Project Q and reject Project P.
 - B) Accept Project P and reject Project Q.
 - C) Reject both Project P and Project Q.
-

Question #7 of 56

Question ID: 460659

A single independent project with a negative net present value has an initial cost of \$2.5 million and would generate cash inflows of \$1 million in each of the next three years. The discount rate the company used when evaluating this project is *closest* to:

- A) 10%.
 - B) 8%.
 - C) 9%.
-

Question #8 of 56

Question ID: 414724

Which of the following statements about independent projects is *least* accurate?

- A) If the internal rate of return is less than the cost of capital, reject the project.
- B) The internal rate of return and net present value methods can yield different accept/reject decisions for independent projects.

- C) The net present value indicates how much the value of the firm will change if the project is accepted.

Question #9 of 56

Question ID: 414738

Which of the following projects would *most likely* have multiple internal rates of return (IRRs)? The cost of capital for all projects is 10.0%.

Cash Flows	South	East	West
CF ₀	-15,000	-12,000	-8,000
CF ₁	10,000	7,000	4,000
CF ₂	-1,000	2,000	0
CF ₃	15,000	2,000	6,000

- A) Projects South and West.
B) Projects East and West.
C) Project South only.

Question #10 of 56

Question ID: 414699

One of the basic principles of capital budgeting is that:

- A) cash flows should be analyzed on a pre-tax basis.
B) decisions are based on cash flows, not accounting income.
C) opportunity costs should be excluded from the analysis of a project.

Question #11 of 56

Question ID: 414730

Which of the following statements about the internal rate of return (IRR) and net present value (NPV) is *least* accurate?

- A) For mutually exclusive projects, if the NPV rankings and the IRR rankings give conflicting signals, you should select the project with the higher IRR.
B) The IRR is the discount rate that equates the present value of the cash inflows with the present value of the outflows.
C) The discount rate that causes the project's NPV to be equal to zero is the project's IRR.

Question #12 of 56

Question ID: 460661

A firm is evaluating two mutually exclusive projects of the same risk class, Project X and Project Y. Both have the same initial cash outlay and both have positive NPVs. Which of the following is a sufficient reason to choose Project X over Project Y?

- A) Project Y has a lower internal rate of return than Project X.
 - B) Project Y has a lower profitability index than Project X.
 - C) Project X has both a shorter payback period and a shorter discounted payback period compared to Project Y.
-

Question #13 of 56

Question ID: 414698

Ashlyn Lutz makes the following statements to her supervisor, Paul Ullring, regarding the basic principles of capital budgeting:

Statement 1: The timing of expected cash flows is crucial for determining the profitability of a capital budgeting project.

Statement 2: Capital budgeting decisions should be based on the after-tax net income produced by the capital project.

Which of the following regarding Lutz's statements is *most* accurate?

<u>Statement 1</u>	<u>Statement 2</u>
--------------------	--------------------

- | | |
|--------------|-----------|
| A) Correct | Incorrect |
| B) Incorrect | Correct |
| C) Correct | Correct |
-

Question #14 of 56

Question ID: 414732

For a project with cash outflows during its life, the least preferred capital budgeting tool would be:

- A) profitability index.
 - B) internal rate of return.
 - C) net present value.
-

Question #15 of 56

Question ID: 414715

Which of the following statements about NPV and IRR is *least* accurate?

- A) For mutually exclusive projects you should use the IRR to rank and select projects.
 - B) For independent projects if the IRR is $>$ the cost of capital accept the project.
 - C) The NPV method assumes that all cash flows are reinvested at the cost of capital.
-

Question #16 of 56

Question ID: 485785

A company is considering two mutually exclusive investment projects. The firm's cost of capital is 12%. Each project costs \$7 million and the after-tax cash flows for each are as follows:

	<u>Project One</u>	<u>Project Two</u>
Year 1	\$6.6 million	\$3.0 million
Year 2	\$1.5 million	\$3.0 million
Year 3	\$0.1 million	\$3.0 million

Indicate which project should be accepted and whether the IRR and NPV methods would lead to the same decision.

Project accepted? Same decision?

- A) Project Two Yes
- B) Project Two No
- C) Project One No

Question #17 of 56

Question ID: 414742

The effect of a company announcement that they have begun a project with a current cost of \$10 million that will generate future cash flows with a present value of \$20 million is *most likely* to:

- A) increase the value of the firm's common shares by \$20 million.
- B) only affect value of the firm's common shares if the project was unexpected.
- C) increase value of the firm's common shares by \$10 million.

Question #18 of 56

Question ID: 414709

Which of the following statements about the discounted payback period is *least* accurate? The discounted payback:

- A) method can give conflicting results with the NPV.
- B) period is generally shorter than the regular payback.
- C) frequently ignores terminal values.

Question #19 of 56

Question ID: 414731

Two projects being considered by a firm are mutually exclusive and have the following projected cash flows:

<i>Year</i>	<i>Project 1 Cash Flow</i>	<i>Project 2 Cash Flow</i>
0	-\$4.0	?
1	\$3.0	\$1.7
2	\$5.0	\$3.2
3	\$2.0	\$5.8

|

The crossover rate of the two projects' NPV profiles is 9%. What is the initial cash flow for Project 2?

- A) -\$4.22.
 - B) -\$5.70.
 - C) -\$4.51.
-

Question #20 of 56

Question ID: 460657

The greatest amount of detailed capital budgeting analysis is typically required when deciding whether to:

- A) replace a functioning machine with a newer model to reduce costs.
 - B) introduce a new product or develop a new market.
 - C) expand production capacity.
-

Question #21 of 56

Question ID: 414710

Landen, Inc. uses several methods to evaluate capital projects. An appropriate decision rule for Landen would be to invest in a project if it has a positive:

- A) internal rate of return (IRR).
 - B) profitability index (PI).
 - C) net present value (NPV).
-

Question #22 of 56

Question ID: 414701

The CFO of Axis Manufacturing is evaluating the introduction of a new product. The costs of a recently completed marketing study for the new product and the possible increase in the sales of a related product made by Axis are best described (respectively) as:

- A) opportunity cost; externality.
 - B) externality; cannibalization.
 - C) sunk cost; externality.
-

Question #23 of 56

Question ID: 414733

When a company is evaluating two mutually exclusive projects that are both profitable but have conflicting NPV and IRR project rankings, the company should:

- A) accept the project with the higher internal rate of return.

- B) use a third method of evaluation such as discounted payback period.
 - C) accept the project with the higher net present value.
-

Question #24 of 56

Question ID: 414702

If two projects are mutually exclusive, a company:

- A) can accept one of the projects, both projects, or neither project.
 - B) can accept either project, but not both projects.
 - C) must accept both projects or reject both projects.
-

Question #25 of 56

Question ID: 414743

Polington Aircraft Co. just announced a sale of 30 aircraft to Cuba, a project with a net present value of \$10 million. Investors did not anticipate the sale because government approval to sell to Cuba had never before been granted. The share price of Polington should:

- A) not necessarily change because new contract announcements are made all the time.
 - B) increase by the $\text{NPV} \times (1 - \text{corporate tax rate})$ divided by the number of common shares outstanding.
 - C) increase by the project NPV divided by the number of common shares outstanding.
-

Question #26 of 56

Question ID: 414696

Which of the following types of capital budgeting projects are *most likely* to generate little to no revenue?

- A) Regulatory projects.
 - B) New product or market development.
 - C) Replacement projects to maintain the business.
-

Question #27 of 56

Question ID: 414723

Which of the following is the *most* appropriate decision rule for mutually exclusive projects?

- A) If the net present value method and the internal rate of return method give conflicting signals, select the project with the highest internal rate of return.
 - B) Accept both projects if their internal rates of return exceed the firm's hurdle rate.
 - C) Accept the project with the highest net present value, subject to the condition that its net present value is greater than zero.
-

Question #28 of 56

Question ID: 414737

Which of the following statements about the internal rate of return (IRR) for a project with the following cash flow pattern is CORRECT?

- Year 0: -\$ 2,000
 - Year 1: \$10,000
 - Year 2: -\$ 10,000
- A) It has two IRRs of approximately 38% and 260%.
- B) No IRRs can be calculated.
- C) It has a single IRR of approximately 38%.

Question #29 of 56

Question ID: 414706

The Seattle Corporation has been presented with an investment opportunity which will yield cash flows of \$30,000 per year in years 1 through 4, \$35,000 per year in years 5 through 9, and \$40,000 in year 10. This investment will cost the firm \$150,000 today, and the firm's cost of capital is 10%. The payback period for this investment is *closest* to:

- A) 6.12 years.
- B) 4.86 years.
- C) 5.23 years.

Question #30 of 56

Question ID: 414728

Which of the following statements regarding the net present value (NPV) and internal rate of return (IRR) is *least* accurate?

- A) For mutually exclusive projects, you must accept the project with the highest NPV regardless of the sign of the NPV calculation.
- B) For independent projects, the internal rate of return IRR and the NPV methods always yield the same accept/reject decisions.
- C) The NPV tells how much the value of the firm will increase if you accept the project.

Question #31 of 56

Question ID: 434326

An analyst has gathered the following data about a company with a 12% cost of capital:

	<i>Project P</i>	<i>Project Q</i>
Cost	\$15,000	\$25,000
Life	5 years	5 years
Cash inflows	\$5,000/year	\$7,500/year

If the projects are independent, what should the company do?

- A) Accept both Project P and Project Q.
 - B) Accept Project P and reject Project Q.
 - C) Reject both Project P and Project Q.
-

Question #32 of 56

Question ID: 414719

A company is considering the purchase of a copier that costs \$5,000. Assume a cost of capital of 10 percent and the following cash flow schedule:

- Year 1: \$3,000
- Year 2: \$2,000
- Year 3: \$2,000

Determine the project's payback period and discounted payback period.

	<u>Payback Period</u>	<u>Discounted Payback Period</u>
A)	2.0 years	2.4 years
B)	2.0 years	1.6 years
C)	2.4 years	1.6 years

Question #33 of 56

Question ID: 460658

The effects that the acceptance of a project may have on other firm cash flows are *best* described as:

- A) pure plays.
 - B) externalities.
 - C) opportunity costs.
-

Question #34 of 56

Question ID: 414741

Garner Corporation is investing \$30 million in new capital equipment. The present value of future after-tax cash flows generated by the equipment is estimated to be \$50 million. Currently, Garner has a stock price of \$28.00 per share with 8 million shares outstanding. Assuming that this project represents new information and is independent of other expectations about the company, what should the effect of the project be on the firm's stock price?

- A) The stock price will increase to \$34.25.
 - B) The stock price will increase to \$30.50.
 - C) The stock price will remain unchanged.
-

A company is considering a \$10,000 project that will last 5 years.

- Annual after tax cash flows are expected to be \$3,000
- Cost of capital = 9.7%

What is the project's net present value (NPV)?

- A) -\$1,460.
- B) +\$11,460.
- C) +\$1,460.

Lincoln Coal is planning a new coal mine, which will cost \$430,000 to build, with the expenditure occurring next year. The mine will bring cash inflows of \$200,000 annually over the subsequent seven years. It will then cost \$170,000 to close down the mine over the following year. Assume all cash flows occur at the end of the year. Alternatively, Lincoln Coal may choose to sell the site today. What minimum price should Lincoln set on the property, given a 16% required rate of return?

- A) \$280,913.
- B) \$325,859.
- C) \$376,872.

Project sequencing is *best* described as:

- A) an investment in a project today that creates the opportunity to invest in other projects in the future.
- B) prioritizing funds to achieve the maximum value for shareholders, given capital limitations.
- C) arranging projects in an order such that cash flows from the first project fund subsequent projects.

Apple Industries, a firm with unlimited funds, is evaluating five projects. Projects A and B are independent and Projects C, D, and E are mutually exclusive. The projects are listed with their rate of return and NPV. Assume that the applicable discount rate is 10%.

Project	Status	Rate of Return	Net Present Value
A	Independent	14%	\$10,500

B	Independent	12%	\$13,400
C	Mutually Exclusive	11%	\$16,000
D	Mutually Exclusive	15%	\$14,000
E	Mutually Exclusive	12%	\$11,500

Rank the projects the firm should select.

- A) Project A, Project B, and Project D.
- B) Project A, Project B, and Project C.
- C) All projects should be selected.

Question #39 of 56

Question ID: 414704

The Chief Financial Officer of Large Closeouts Inc. (LCI) determines that the firm must engage in capital rationing for its capital budgeting projects. Which of the following describes the *most likely* reason for LCI to use capital rationing? LCI:

- A) must choose between projects that compete with one another.
- B) has a limited amount of funds to invest.
- C) would like to arrange projects so that investing in a project today provides the option to accept or reject certain future projects.

Question #40 of 56

Question ID: 414707

The process of evaluating and selecting profitable long-term investments consistent with the firm's goal of shareholder wealth maximization is known as:

- A) monitoring.
- B) capital budgeting.
- C) financial restructuring.

Question #41 of 56

Question ID: 414703

Rosalie Woischke is an executive with ColaCo, a nationally known beverage company. Woischke is trying to determine the firm's optimal capital budget. First, Woischke is analyzing projects Sparkle and Fizz. She has determined that both Sparkle and Fizz are profitable and is planning on having ColaCo accept both projects. Woischke is particularly excited about Sparkle because if Sparkle is profitable over the next year, ColaCo will have the opportunity to decide whether or not to invest in a third project, Bubble. Which of the following terms *best* describes the type of projects represented by Sparkle and Fizz as well as the opportunity to invest in Bubble?

Sparkle and Fizz

Opportunity to invest in Bubble

- A) Independent projects Add-on project
- B) Mutually exclusive projects Project sequencing
- C) Independent projects Project sequencing

Question #42 of 56

Question ID: 414700

Mason Webb makes the following statements to his boss, Laine DeWalt about the principles of capital budgeting.

Statement 1: Opportunity costs are not true cash outflows and should not be considered in a capital budgeting analysis.

Statement 2: Cash flows should be analyzed on an after-tax basis.

Should DeWalt agree or disagree with Webb's statements?

Statement 1

Statement 2

- A) Agree Agree
- B) Disagree Disagree
- C) Disagree Agree

Question #43 of 56

Question ID: 414716

As the director of capital budgeting for Denver Corporation, an analyst is evaluating two mutually exclusive projects with the following net cash flows:

Year	Project X	Project Z
0	-\$100,000	-\$100,000
1	\$50,000	\$10,000
2	\$40,000	\$30,000
3	\$30,000	\$40,000
4	\$10,000	\$60,000

If Denver's cost of capital is 15%, which project should be chosen?

- A) Project X, since it has the higher net present value (NPV).
- B) Neither project.
- C) Project X, since it has the higher IRR.

Question #44 of 56

Question ID: 414711

Which of the following statements about the payback period is NOT correct?

- A) The payback period provides a rough measure of a project's liquidity and risk.
 - B) The payback period is the number of years it takes to recover the original cost of the investment.
 - C) The payback method considers all cash flows throughout the entire life of a project.
-

Question #45 of 56

Question ID: 414717

Tapley Acquisition, Inc., is considering the purchase of Tangent Company. The acquisition would require an initial investment of \$190,000, but Tapley's after-tax net cash flows would increase by \$30,000 per year and remain at this new level forever. Assume a cost of capital of 15%. Should Tapley buy Tangent?

- A) Yes, because the NPV = \$10,000.
 - B) No, because $k > IRR$.
 - C) Yes, because the NPV = \$30,000.
-

Question #46 of 56

Question ID: 414740

When using net present value (NPV) profiles:

- A) one should accept all independent projects with positive NPVs.
 - B) one should accept all mutually exclusive projects with positive NPVs.
 - C) the NPV profile's intersection with the vertical y-axis identifies the project's internal rate of return.
-

Question #47 of 56

Question ID: 434324

Lane Industries has a project with the following cash flows:

Year	Cash Flow
0	-\$200,000
1	60,000
2	80,000
3	70,000
4	60,000
5	50,000

The project's cost of capital is 12%. The discounted payback period is *closest* to:

- A) 3.4 years.
- B) 3.9 years.
- C) 2.9 years.

Question #48 of 56

Question ID: 414735

Which of the following statements regarding the internal rate of return (IRR) is *most* accurate? The IRR:

- A) can lead to multiple IRR rates if the cash flows extend past the payback period.
 - B) and the net present value (NPV) method lead to the same accept/reject decision for independent projects.
 - C) assumes that the reinvestment rate of the cash flows is the cost of capital.
-

Question #49 of 56

Question ID: 414697

Financing costs for a capital project are:

- A) subtracted from the net present value of a project.
 - B) captured in the project's required rate of return.
 - C) subtracted from estimates of a project's future cash flows.
-

Question #50 of 56

Question ID: 460660

In a net present value (NPV) profile, the internal rate of return is represented as the:

- A) intersection of the NPV profile with the vertical axis.
 - B) point where two NPV profiles intersect.
 - C) intersection of the NPV profile with the horizontal axis.
-

Question #51 of 56

Question ID: 412846

Jack Smith, CFA, is analyzing independent investment projects X and Y. Smith has calculated the net present value (NPV) and internal rate of return (IRR) for each project:

Project X: NPV = \$250; IRR = 15%
Project Y: NPV = \$5,000; IRR = 8%

Smith should make which of the following recommendations concerning the two projects?

- A) Accept both projects.
 - B) Accept Project X only.
 - C) Accept Project Y only.
-

Question #52 of 56

Question ID: 414720

Edelman Engineering is considering including an overhead pulley system in this year's capital budget. The cash outlay for the pulley system is \$22,430. The firm's cost of capital is 14%. After-tax cash flows, including depreciation are \$7,500 for each of the next 5 years.

Calculate the internal rate of return (IRR) and the net present value (NPV) for the project, and indicate the correct accept/reject decision.

	<u>NPV</u>	<u>IRR</u>	<u>Accept/Reject</u>
A)	\$15,070	14%	Accept
B)	\$3,318	20%	Accept
C)	\$15,070	14%	Reject

Question #53 of 56

Question ID: 414726

Which of the following statements about NPV and IRR is NOT correct?

- A) The NPV will be positive if the IRR is less than the cost of capital.
 - B) The IRR can be positive even if the NPV is negative.
 - C) When the IRR is equal to the cost of capital, the NPV equals zero.
-

Question #54 of 56

Question ID: 414727

The underlying cause of ranking conflicts between the net present value (NPV) and internal rate of return (IRR) methods is the underlying assumption related to the:

- A) cash flow timing.
 - B) reinvestment rate.
 - C) initial cost.
-

Question #55 of 56

Question ID: 414718

A firm is reviewing an investment opportunity that requires an initial cash outlay of \$336,875 and promises to return the following irregular payments:

-
- Year 1: \$100,000
 - Year 2: \$82,000
 - Year 3: \$76,000
 - Year 4: \$111,000
 - Year 5: \$142,000

If the required rate of return for the firm is 8%, what is the net present value of the investment? (You'll need to use your financial calculator.)

- A) \$99,860.
 - B) \$64,582.
 - C) \$86,133.
-

Question #56 of 56

Question ID: 414712

A company is considering the purchase of a copier that costs \$5,000. Assume a cost of capital of 10 percent and the following cash flow schedule:

- Year 1: \$3,000
- Year 2: \$2,000
- Year 3: \$2,000

Determine the project's NPV and IRR.

	<u>NPV</u>	<u>IRR</u>
A)	\$243	20%
B)	\$883	20%
C)	\$883	15%