

**LO.a: Describe the capital budgeting process and distinguish among the various categories of capital projects.**

1. A large corporation embarks on an investment which exposes it to uncertainties and hence involves more people in the decision-making process, the project is *most likely* a:
  - A. replacement project.
  - B. new product or service.
  - C. expansion project.
2. The post-audit stage of capital budgeting *least likely* includes:
  - A. rescheduling and prioritizing of projects.
  - B. indication of systematic errors.
  - C. provision of future investment ideas.

**LO.b: Describe the basic principles of capital budgeting.**

3. When computing the cash flows for a capital project, which of the following is *most likely* to be included?
  - A. Accounting income.
  - B. Financing costs.
  - C. Opportunity costs.
4. A company that sells energy drinks is evaluating an expansion of its production facilities to also produce soda drinks. The company's marketing department recommended producing soda drinks as it would increase the company's energy drinks sales because of an increase in brand awareness. What impact will the cash flows from the expected increase in energy drinks sales *most likely* have on the NPV of the soda drinks project?
  - A. Decrease.
  - B. Increase.
  - C. No effect.
5. Which of the following is *least likely* classified as an externality?
  - A. The cash flows generated by an old machine that is to be replaced.
  - B. The cash flows from an investment that erodes sales of other products of the company.
  - C. An investment that benefits society at large.
6. Which of the following is *least likely* to be included when determining cash flows during capital budgeting?
  - A. Externalities.
  - B. Opportunity cost.
  - C. Sunk cost.
7. In the context of capital budgeting, an appropriate estimate of the incremental cash flows from a project is *least likely* to consider:
  - A. opportunity costs.

- B. externalities.
- C. interest costs.

**LO.c: Explain how the evaluation and selection of capital projects is affected by mutually exclusive projects, project sequencing, and capital rationing.**

8. Two mutually exclusive projects have the following cash flows (\$) and internal rates of return

Project	IRR	Year 0	Year 1	Year 2	Year 3	Year 4
X	26.36%	-2,340	240	729	505	3,680
Y	26.68%	-2,340	240	729	990	3,115

Assuming a discount rate of 10% annually for both projects, the firm should *most likely* accept:

- A. both projects.
  - B. project X only.
  - C. project Y only.
9. A firm is analyzing different new projects for investment but cannot choose more than an outlay of \$30 million. This is *most likely* due to:
- A. capital rationing.
  - B. project sequencing.
  - C. new product or service.

10. Consider the following two mutually exclusive projects:

Project	Year 0	Year 1	Year 2	Year 3
Project A	-3518	2500	1450	500
Project B	-3846	900	1500	2500

At an annual discount rate of 10% for both projects, the firm should *most likely* accept:

- A. project A.
  - B. project B.
  - C. both projects.
11. Mutually exclusive capital budgeting projects A and B have similar outlays, but different pattern of future cash flows. The required rate of return for both projects is 12 percent, at which the NPV and IRR turn out to be as follows:

Year	Cash Flows					NPV	IRR (%)
	0	1	2	3	4		
Project A	-100	0	0	0	200	24.20	18.92
Project B	-100	40	40	40	40	19.19	21.86

The appropriate investment decision in this case is to:

- A. invest in Project A because it has the higher NPV.
- B. reject both projects as the decision is unclear.
- C. invest in Project B because it has the higher IRR.

**LO.d: Calculate and interpret net present value (NPV), internal rate of return (IRR), payback period, discounted payback period, and profitability index (PI) of a single capital project.**

12. A project has the following cash flows (£):

Year 0	Year 1	Year 2	Year 3	Year 4
-3,250	1505	550	955	1,820

Assuming a discount rate of 7% annually, the discounted payback period (in years) is *closest* to:

- A. 3.1.
- B. 3.4.
- C. 3.7.

13. The project has the following annual cash flows:

Year 0:	Year 1:	Year 2:	Year 3:	Year 4:
-\$85,540	\$42,100	\$23,025	\$30,200	\$16,000

With a discount rate of 7%, the discounted payback period (in years) is *closest* to:

- A. 2.8.
- B. 3.1.
- C. 3.5.

14. A project investment of \$100 generates after-tax cash flows of \$50 in Year 1, \$60 in Year 2, \$120 in Year 3 and \$150 in Year 4. The required rate of return is 15 percent. The net present value is *closest* to:

- A. \$153.51.
- B. \$158.33.
- C. \$168.52.

15. A project manager is working on a complicated large-scale project for a company that will require multiple investments over time while giving cash-inflows in some years over a period of four years. He develops the following cash flow schedule for his project:

Year 0	-£900,000.00
Year 1	£6,344,400.00
Year 2	-£8,520,364.00
Year 3	£2,245,066.00
Year 4	£650,000.00

At which of the following discount rates is the project *least likely* to be undertaken?

- A. 18%.
- B. 16%.
- C. 13%.

16. Given below are the cash flows for a capital project. The required rate of return is 10 percent.

Year	0	1	2	3	4	5
Cash flow	(75,000)	25,000	30,000	30,000	15,000	7,500

The discounted payback period is:

- A. 1.01 years longer than the payback period.
- B. 0.81 years longer than the payback period.
- C. 1.21 years longer than the payback period.

17. A project has the following annual cash flows:

Year 0	Year 1	Year 2	Year 3
- 450,000	- 1,000,000	1,000,000	1,000,000

What is the IRR of this project?

- A. 7.5%.
- B. 15.5%.
- C. 19.5%.

18. A capital investment of \$90,000 is expected to generate an after-tax cash flow of \$50,000 one year from today and a cash flow of \$55,000 two years from today. The cost of capital is 12 percent. The internal rate of return is *closest* to:

- A. 7.89 percent.
- B. 13.45 percent.
- C. 10.74 percent.

19. A capital project with a net present value (NPV) of € 14.02 has the following cash flows in euros:

Year	0	1	2	3	4	5
Cash Flows	-150	40	40	50	60	40

The internal rate of return (IRR) for the project is *closest* to:

- A. 10%.
- B. 12%.
- C. 16%.

20. An analyst determines the following cash flows for a capital project:

Year	0	1	2	3	4	5
Cash Flow (\$)	-200	80	65	45	45	30

The required rate of return of the project is 12 percent. The net present value (NPV) of the project is *closest* to:

- A. \$1.0.
- B. \$1.5.
- C. \$3.5.

21. Given below are the cash flows for a capital project.

Year	0	1	2	3	4	5
Cash flow	(75,000)	25,000	30,000	30,000	15,000	7,500

Assuming the cost of capital is 10 percent, the NPV and IRR are closest to:

NPV                      IRR

- |    |       |       |
|----|-------|-------|
| A. | 9,962 | 12.3% |
| B. | 5,521 | 15.9% |
| C. | 9,962 | 15.9% |
22. A project requires an initial outlay of \$75,000. It is expected to result in positive cash flows of \$20,000 for the first two years. Projections for the third and fourth year are \$36,000 and \$38,000 respectively. Given that the discount rate is 9%, the discounted payback for the project is *closest* to:
- A. 2.6 years.
  - B. 3.0 years.
  - C. 3.4 years.
23. Alpha Corporation is considering investing €500 million with expected after-tax cash inflows of €110 million per year for six consecutive years. The required rate of return is 8 percent. The project's payback period and discounted payback period, respectively, are *closest* to:
- A. 4.3 years and 5.4 years.
  - B. 4.5 years and 5.9 years.
  - C. 4.8 years and 5.9 years.
24. A perpetual after-tax cash flow stream of \$2,000 is created by an investment of \$15,000. The required rate of return is 8 percent. The investment's profitability index is *closest* to:
- A. 1.50.
  - B. 1.67.
  - C. 1.25.
25. Digital Design Corporation is considering an investment of £400 million with expected after-tax cash inflows of £100 million per year for five years and an additional after-tax salvage value of £50 million in Year 5. The required rate of return is 7.5 percent. What is the investment's PI?
- A. 0.8.
  - B. 1.2.
  - C. 1.1.
- LO.e: Explain the NPV profile, compare the NPV and IRR methods when evaluating independent and mutually exclusive projects, and describe the problems associated with each of the evaluation methods.**
26. At which point the net present value profiles of two mutually exclusive projects with normal cash flows are *most likely* to intersect the horizontal axis?
- A. Crossover rate for the projects.
  - B. Internal rates of return of the projects.
  - C. The company's weighted average cost of capital (WACC).
27. Alpha Corporation is considering investing €500 million with expected after-tax cash inflows of €110 million per year for six consecutive years. The required rate of return is 8 percent. The project's NPV and IRR are *closest* to:

	<u>NPV?</u>	<u>IRR?</u>
A.	€7 million	8.6%
B.	€9 million	8.6%
C.	€11 million	5.9%

28. While developing the net present value (NPV) profiles for two investment projects, the analyst notes the only difference between the two projects is that Project Alpha is expected to receive larger cash flows early in the life of the project, while Project Beta is expected to receive larger cash flows late in the life of the project. The sensitivities of the projects' NPVs to changes in the discount rate is *best* described as:
- equal for the two projects.
  - lower for Project Alpha than for Project Beta.
  - greater for Project Alpha than for Project Beta.
29. Two mutually exclusive projects have conventional cash flows, but one project has a larger NPV while the other has a higher IRR. Which of the following *most likely* explains this conflict?
- The size of the two projects is the same.
  - Risk of the projects as reflected in the required rate of return.
  - Differing cash flow patterns.
30. Claude Browning is reviewing a profitable investment project that has a conventional cash flow pattern. If the cash flows of the project, initial outlay, and future after-tax cash flows all reduce by half, Browning would predict that the IRR would:
- stay the same and the NPV would decrease.
  - stay the same and the NPV would stay the same.
  - decrease and the NPV would decrease.
31. Erika Schneider has evaluated an investment proposal and found that its payback period is two years, it has a negative NPV, and a positive IRR. Is this combination of results possible?
- No, because a project with a positive IRR has a positive NPV.
  - No, because a project with such a rapid payback period has a positive NPV.
  - Yes.
32. Capital budgeting projects A and B have similar outlays, but different patterns of future cash flows. The required rate of return for both projects is 12 percent, at which the NPV and IRR turn out to be as follows:

Year	Cash Flows					NPV	IRR (%)
	0	1	2	3	4		
Project A	-50	0	0	0	110	17.77	21.79
Project B	-50	22	22	22	22	15.02	27.18

The discount rate which would result in the same NPV for both projects is:

- a rate between 21.79 percent and 27.18 percent.

- B. a rate between 0.00 percent and 12.00 percent.
- C. a rate between 12.00 percent and 21.79 percent.

33. Katrina Lowry is facing multiple IRRs problem regarding an upcoming project.

Year	0	1	2
Cash flows	-1.6	10	-10

The NPV is zero when the discount rate is:

- A. 25 percent only.
  - B. 25 percent and 600 percent.
  - C. 25 percent and 400 percent.
34. In the context of net present value (NPV) profiles of two projects, the crossover rate is *most appropriately* described as the discount rate at which:
- A. two projects have the same NPV.
  - B. a project's NPV changes sign from negative to positive.
  - C. two projects have the same internal rate of return.
35. In the context of net present value (NPV) profiles, the point at which a profile crosses the vertical axis is *most appropriately* described as:
- A. a project's internal rate of return when the project's NPV is equal to zero.
  - B. the sum of the undiscounted cash flows from a project.
  - C. the point at which two projects have the same NPV.
36. In the context of net present value (NPV) profiles, the point at which a profile crosses the horizontal axis is *most appropriately* described as:
- A. a project's internal rate of return when the project's NPV is equal to zero.
  - B. the sum of the undiscounted cash flows from a project.
  - C. the point at which two projects have the same NPV.
37. A project with an initial investment of 50 has annual after-tax cash flows of 20 for four years. A project reengineering initiative decreases the outlay by 15 and the annual after-tax cash flows by 10. Consequently, the vertical intercept of the NPV profile of the reengineered project shifts:
- A. up and the horizontal intercept shifts left.
  - B. down and the horizontal intercept shifts left.
  - C. down and the horizontal intercept shifts right.

**LO.f: Describe expected relations among an investment's NPV, company value, and share price.**

38. Gerald Phelps, a financial planner for a large industrial corporation, wants to employ a capital budgeting technique that is most directly related to stock price. He is *most likely* to use the:
- A. discounted payback period.

- B. net present value.
  - C. profitability index.
39. A company manager wants to assess the impact of a new project on shareholders' wealth. Which of the following capital budgeting techniques would be *most appropriate*?
- A. Internal rate of return.
  - B. Net present value.
  - C. Profitability index.



## Solutions

1. B is correct. New product or service would involve more uncertainties and complex decision making.
2. A is correct. Rescheduling and prioritizing projects is part of the planning stage of the capital budgeting process, not the post-audit.
3. C is correct. Capital budgeting cash flows are based on opportunity costs. Accounting income is different from capital budgeting cash flows since non-cash items are included in it. Financing costs are not included in a cash flow calculation but are considered in the calculation of the discount rate
4. B is correct. The increase in energy drinks sales represents a positive externality that will increase the NPV of the project and should be included in the NPV analysis.
5. A is correct. Choices B & C are examples of an externality.
6. C is correct. Sunk costs are costs that cannot be avoided. These costs do not affect the ‘accept or reject’ decision. Therefore they are not included as part of the cash flow determination. Externalities include the resulting impact or the effects on a third party. These are taken into consideration when calculating cash flows. Opportunity costs are cash flows the firm will lose by taking up a certain project. These are also considered during capital budgeting.
7. C is correct. Including interest costs in the cash flows would result in double-counting the cost of debt as they are already taken into account when the cash flows are discounted at the appropriate cost of capital.
8. B is correct. Compute the NPV of both the projects at 10% discount rate. Using the financial calculator, enter CF for Years 0 – 4.  
 Project X:  $CF_0 = -2340$ ,  $CF_1 = 240$ ,  $CF_2 = 729$ ,  $CF_3 = 505$ ,  $CF_4 = 3680$ ,  $I = 10$ , CPT NPV.  
 $NPV = \$1,373.56$ .  
 Project Y:  $CF_0 = -2340$ ,  $CF_1 = 240$ ,  $CF_2 = 729$ ,  $CF_3 = 990$ ,  $CF_4 = 3115$ ,  $I = 10$ , CPT NPV.  
 $NPV = \$1,352.05$ .  
 B is correct because Project X has a higher NPV and the projects are mutually exclusive, only Project X should be accepted.
9. A is correct. Capital rationing involves limited budget for investment.
10. A is correct. Plug in the relevant cash flows into the financial calculator for both the projects and compute the NPVs.  
 Project A:  $CF_0 = -3518$ ,  $CF_1 = 2500$ ,  $CF_2 = 1450$ ,  $CF_3 = 500$ ,  $I = 10\%$ , CPT NPV  
 $NPV_A = \$328.73$   
 Project B:  $CF_0 = -3846$ ,  $CF_1 = 900$ ,  $CF_2 = 1500$ ,  $CF_3 = 2500$ ,  $I = 10\%$ , CPT NPV  
 $NPV_B = \$90.14$

Since both projects are mutually exclusive i.e. the firm can only accept one, it would choose the one with the higher NPV which is A.

11. A is correct. When valuing mutually exclusive projects, the decision should be made with the NPV method because this method uses the most realistic discount rate, namely the opportunity cost of funds. In the example, the reinvestment rate for the NPV project (here 12 percent) is more realistic than the reinvestment rate for the IRR method (here 18.92 percent or 21.86 percent).

12. B is correct.

Year	Cash flow	Discounted cash flow = $\frac{CF_n}{(1.07)^n}$	Cumulative discounted cash flow [CF <sub>0</sub> – Cumulative PV cash flows]
0	-3,250	-3,250	-3,250
1	1505	1406.54	-1843.46
2	550	480.39	-1363.07
3	955	779.56	-583.51
4	1,820	1388.47	804.96

Proportionately, only 0.42 = (\$583.51/\$1388.47) of the cash flow in the fourth year is necessary to recover all of the investment. This makes the discounted payback equal to 3.4 years.

13. B is correct.

Year	Cash flow	Discounted cash flow $\frac{CF_n}{(1.07)^n}$	Cumulative discounted cash flow: [CF <sub>0</sub> – Cumulative PV cash flows]
0	-85,540	-85,540	-85,540
1	42,100	39,346	-46,194
2	23,025	20,111	-26,083
3	30,200	24,652	-1,431
4	16,000	12,206	

The discounted payback is 3.1 years:  $(3 + \frac{1431}{12206})$

14. A is correct.

$$NPV = -100 + \frac{50}{1.15} + \frac{60}{1.15^2} + \frac{120}{1.15^3} + \frac{150}{1.15^4} = 153.51$$

Using a financial calculator, enter the cash flows.

CF<sub>0</sub> = - 100, CF<sub>1</sub> = 50, CF<sub>2</sub> = -60, CF<sub>3</sub> = 120, CF<sub>4</sub> = 150, I = 15, CPT NPV. NPV = 153.51

15. C is correct. The question requires that NPV be found at each of the discount rates given as answer choices. When the NPV of cash flows is negative, the project is least likely to be undertaken.

Using a financial calculator, first enter the cash flows.

$CF_0 = -900,000$ ,  $CF_1 = 6,344,400$ ,  $CF_2 = -8,520,364$ ,  $CF_3 = 2,245,066$ ,  $CF_4 = 650,000$

Then, determine the NPV for each of the given discount rates

When  $I = 13\%$ , CPT NPV = -3,581

When  $I = 16\%$ , CPT NPV = +34,600

When  $I = 18\%$ , CPT NPV = +59,097

Hence, project will least likely be undertaken when the discount rate is 13% as the NPV is negative, while at the other two discount rates it is positive.

16. B is correct.

Year	0	1	2	3	4	5
Cash flow	(75,000)	25,000	30,000	30,000	15,000	7,500
Cumulative cash flow	(75,000)	(50,000)	(20,000)	10,000	25,000	32,500
Discounted cash flow	(75,000)	22,727.27	24,793.39	22,539.44	10,245.20	4,656.91
Cumulative DCF	(75,000)	(52,272.73)	(27,479.34)	(4,939.89)	5,305.31	9,962.22

As the table shows, the payback is between 2 and 3 years. The payback period is 2 years plus  $\frac{20,000}{30,000} = 0.67$  of the third year cash flow, or 2.67 years. The discounted payback is between 3 and 4 years. The discounted payback is 3 years plus  $\frac{4,939.89}{10,245.20} = 0.48$  of the fourth year cash flow, or 3.48 years. The discounted payback period is  $3.48 - 2.67 = 0.81$  years longer than the payback period.

17. C is correct. Enter the following values in a financial calculator:  $CF_0 = -450,000$ ,  $CF_1 = -1,000,000$ ,  $CF_2 = 1,000,000$ ,  $CF_3 = 1,000,000$ , CPT IRR. IRR = 19.47%

18. C is correct. Enter the following values in a financial calculator:  $CF_0 = -90,000$ ,  $CF_1 = 50,000$ ,  $CF_2 = 55,000$ , CPT IRR. IRR = 10.74 percent.

19. C is correct. Enter the following values in a financial calculator:  $CF_0 = -150$ ,  $CF_1 = 40$ ,  $CF_2 = 40$ ,  $CF_3 = 50$ ,  $CF_4 = 60$ ,  $CF_5 = 40$ , CPT IRR. IRR = 15.57% rounding up to 16%.

20. A is correct. Enter the following values in a financial calculator:  $CF_0 = -200$ ,  $CF_1 = 80$ ,  $CF_2 = 65$ ,  $CF_3 = 45$ ,  $CF_4 = 45$ ,  $CF_5 = 30$ ,  $I = 12$ , NPV CPT = 0.897 ~ \$1.0

21. C is correct.

Enter the following values in a financial calculator to determine NPV and IRR:

$CF_0 = -75,000$ ,  $CF_1 = 25,000$ ,  $CF_2 = 30,000$ ,  $CF_3 = 30,000$ ,  $CF_4 = 15,000$ ,  $CF_5 = 7,500$ ,  $I = 10$ , CPT NPV. NPV = 9962.22. CPT IRR. IRR = 15.94%.

22. C is correct.

	Initial outlay	Year 1	Year 2	Year 3	Year 4
<b>Cash flow</b>	-75,000	20,000	20,000	36,000	38,000
<b>Discounted cash flow</b>	-75,000	18,349	16,834	27,799	26,920
<b>Cumulative DCF</b>	-75,000	-56,651	-39,817	-12,018	14,902

$$\text{Discounted cash flow} = \frac{\text{Cash flow}}{(1 + \text{discount rate})^n}$$

$$\text{Discounted payback period} = 3 + \frac{12018}{26920} = 3.4$$

23. B is correct.

Year	0	1	2	3	4	5	6
Cash flow	(500)	110	110	110	110	110	110
Cumulative cash flow	(500)	(390)	(280)	(170)	(60)	50	160

The payback is between 4 and 5 years. The payback period is 4 years plus  $\frac{60}{110} = 0.55$  of the fifth year cash flow, or 4.55 years.

Year	0	1	2	3	4	5	6
Cash flow	(500)	110	110	110	110	110	110
Discounted cash flow	(500)	101.85	94.31	87.32	80.85	74.86	69.32
Cumulative DCF	(500)	(398.15)	(303.84)	(216.52)	(135.67)	(60.81)	8.51

The discounted payback is between 5 and 6 years. The discounted payback period is 5 years plus  $\frac{60.81}{69.32} = 0.88$  of the sixth year cash flow, or 5.88 years.

24. B is correct. The present value of future cash flows is  $PV = \frac{2,000}{0.08} = 25,000$

$$\text{The profitability index is } PI = \frac{PV}{\text{Investment}} = \frac{25,000}{15,000} = 1.67.$$

25. C is correct. Using the calculator:

$$CF_0 = -400, C_01 = 100, F_01 = 5, C_02 = 50, F_02 = 1, I = 7.5, \text{CPT NPV. NPV} = 36.99.$$

$$PI = 1 + \frac{36.99}{400} = 1.1$$

26. B is correct. For a project with normal cash flows, the NPV profile intersects the horizontal axis at the point where the discount rate is equal to the IRR. The crossover rate is the discount rate at which the NPVs of the projects are equal. While it is possible that the

crossover rate is equal to each project's IRR, it is not a likely event. The IRR for both projects being the firm's WACC will only arise when both projects have a NPV=0.

27. B is correct.

Enter the following values in a financial calculator to determine NPV and IRR.

CF0 = -500, C01 = 110, F01 = 6, I = 8, CPT NPV. NPV = 8.52 million euro. CPT IRR. IRR = 8.56 per cent.

28. B is correct. A delay in the receipt of cash flows (as in Project Beta) will make a project's net present value more sensitive to changes in the discount rate.

29. C is correct. Conflicts between the NPV decision and IRR are due to the scale/size of the project or the different cash flows pattern. Since the size is the same the difference in cash flows will cause the conflict.

30. A is correct. The IRR would stay the same because both the initial outlay and the after-tax cash flows halve, so that the return on each dollar invested remains the same. All of the cash flows and their present values also reduce in half. The difference between the total present value of the future cash flows and the initial outlay (the NPV) also halves.

31. C is correct. If the cumulative cash flows in the first two years equal the outlay and additional cash flows are not very large, this scenario is possible. For example, assume the outlay is 100, the cash flow in Year 1 and 2 is 50 each and the cash flow in Year 3 is 3. The required return is 10 percent. This project would have a payback of 2.0 years, an NPV of -10.97, and an IRR of 1.94 percent.

32. C is correct. For these projects, a discount rate of 15.09 percent would yield the same NPV for both (an NPV of 11.03). The cross over point needs to be before the lower IRR (21.79).

Note: The discount rate (crossover point) at which both the projects have the same NPV is the IRR for the differences in cash flows of the projects. For instance, in this case, it is CF0 = 0, CF1 = -22, CF2 = -22, CF3 = -22, CF4 = 88, CPT IRR. IRR = 15.09%.

33. C is correct. The table below shows the NPV at different discount rates.

Rate	0%	25%	100%	200%	300%	400%	500%
NPV	-1.6	0.00	0.45	0.21	0.07	0.00	-0.04

34. A is correct. The crossover rate is the rate at which the NPVs of the projects are the same.

35. B is correct. The vertical axis represents zero discount rate. The point at which the NPV profile crosses the vertical axis is simply the sum of undiscounted cash flows.

36. A is correct. The horizontal axis represents an NPV of zero. By definition, the project IRR gives an NPV of zero.

37. B is correct. The vertical intercept changes from 30 to 5 (NPV, when cost of capital is 0%), and the horizontal intercept (IRR, when NPV equals zero) changes from 21.86 percent to 5.56 percent.
38. B is correct. The NPV criterion is the criterion most directly related to stock prices. If a corporation invests in positive NPV projects, these should add to the wealth of its shareholders.
39. B is correct. NPV or Net Present Value is the most appropriate capital budgeting technique to be used because positive NPV projects add value to shareholder's wealth and a company's total value is the value of its existing investments in addition to the NPV of all of its future investments. Hence, it is the criterion that is most directly related to stock prices.