

***Analysis for Financial Management 13th edition
Higgins Solutions Manual***

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*Analysis for Financial Management, 13e***SUGGESTED ANSWERS TO EVEN-NUMBERED PROBLEMS****Chapter 1**

2. Management is either foolish or thinks its board is. Earning \$100 million on a \$5 billion equity investment is a return of 2 percent, which is below any reasonable cost of equity. As a board member, I would vote to cut management's compensation, not raise it. I would also criticize them for apparently attempting to deceive the board.
4. a. Cash rises \$500,000; plant and equipment falls \$300,000; equity rises \$200,000.
 b. Net plant and equipment rises \$80 million; Cash falls \$32 million; Bank debt rises \$48 million.
 c. Net plant and equipment rises \$60 million; cash falls \$60 million.
 d. Cash falls \$40,000; Accounts payable falls \$40,000.
 e. Cash falls \$240,000; Owners' equity falls by \$240,000 (via an increase in Treasury stock).
 f. Cash rises \$80,000; Inventory falls; Accrued taxes, Owners' equity, and possibly other cost categories rise such that the algebraic sum equals \$80,000.
 g. Accounts receivable rise \$120,000. Other categories change as described in part f.
 h. Cash falls \$50,000. Owners' equity falls by \$50,000 (via Retained earnings).
6. a. **R&E Supplies, Inc.** Sources and Uses Statement 2018–2021 (\$ thousands)

Sources of cash:

Decrease in cash and securities	\$259
Increase in accounts payable	2,205
Increase in current portion long-term debt	40
Increase in accrued wages	13
Increase in retained earnings	<u>537</u>
Total	\$3,054

Uses of cash:

Increase in accounts receivable	\$1,543
Increase in inventories	1,148
Increase in prepaid expenses	4
Increase in net fixed assets	159
Decrease in long-term debt	<u>200</u>
Total	\$3,054

- b. Insights:
- i. R&E is making extensive use of trade credit to finance a buildup in current assets. The increase in accounts payable equals almost three fourths of total sources of cash. Increasing accounts receivable and inventories account for almost 90 percent of the uses of cash.
 - ii. External long-term debt financing is a use of cash for R&E, meaning that it is repaying its loans. A restructuring involving less reliance on accounts payable and more bank debt appears appropriate.
8. Accounting income will be the value of the parcels sold, less their original purchase price. So if all parcels are sold, the income is $5 \times \$16 \text{ million} + 5 \times \$8 \text{ million} - \$100 \text{ million} = \20 million . Economic income will be the increase in the market value of the land, whether sold or not, over the period. At the end of the first year, this will be \$20 million. Answers to each part of the question appear below.

<i>Question</i>	<i>Accounting Income</i>	<i>Economic Income</i>
a.	\$20 million	\$20 million
b.	\$0	\$20 million
c.	-\$10 million	\$20 million
d.	\$30 million	\$20 million

- e. Too many companies have tried this. If the market value of a piece of land falls, the owner loses whether he sells or not. The market price of the land fell because people thought the future income stream to the owners was worth less. Continuing to hold the property forces the owner to accept the lower income. Whether the loss is recognized or not might affect accounting earnings, but has nothing to do with reality.
10. The accounting profits from Desmond's brewery are expected to be \$60,000. These accounting profits do not include the implicit cost of the entrepreneur's time. Desmond's time is worth at least \$70,000, the current income he will have to forego to manage the brewery. When these implicit opportunity costs are included income falls to:

$$\$250,000 - \$190,000 - \$70,000 = -\$10,000$$

This new venture will clearly reduce Desmond's income, not increase it.

12. a.

<i>Company</i>	<i>A</i>	<i>B</i>	<i>C</i>
End-of-year cash balance	\$150 million	\$30 million	\$120 million

- b. It appears that company C retired more debt than it issued, repurchased more stock than it issued, or some combination of the two.
- c. I'd prefer to own company A. A appears to be a growing company as evidenced by the sizable net cash used in investing activities, and its negative net cash flow from operations may well be due to increasing accounts receivable and inventories that naturally accompany sales growth. Company B appears not to be growing, so its negative net cash flows from operations are probably due to losses or to increasing receivables and inventories relative to sales, a trend denoting poor management of current assets.
- d. I don't think there is necessarily any cause for concern. It appears company C is a mature, slow-growth company that is returning its unneeded operating cash flows to investors in the form of debt repayment, share repurchase, dividends, or some combination of these. This is a perfectly viable strategy in the absence of attractive investment opportunities.

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14. See suggested solutions to Excel problems at McGraw-Hill's *Connect* or at www.mhhe.com/Higgins13e.

Chapter 2

2.
 - a. Price-to-earnings ratios are highly dependent on future growth expectations. I would expect the high-growth Alphabet to have a higher P/E ratio than the low-growth Union Pacific.
 - b. The financial institution should have a higher debt-to-equity ratio because the liquid, relatively safe nature of its assets enables it to borrow more money at attractive rates. And in the case of banks, deposit insurance enables the institution to collect low-cost deposits. The principal asset of financial institutions tends to be relatively safe loans that generate relatively predictable income streams. The uncertain income stream of the high-tech company makes it less creditworthy, suggesting a lower debt-to-equity ratio, all else equal.
 - c. The appliance manufacturer should have the higher profit margin because it adds more value to its product than a grocer does and hence can charge a higher markup over cost.
 - d. The jewelry store should have the higher current ratio. Jewelry stores typically need to have a lot of expensive display inventory on hand and often offer time payment plans to customers. Online bookstores, on the other hand, typically carry little inventory and rely on credit card sales involving little accounts receivable.

4.
 - a. ROE will most likely fall. The numerator of the ratio, net income, will decline because the acquired company is losing money. Unless the acquiring firm's equity declines due to the acquisition, a highly unlikely event, ROE will decline.
 - b. This, however, is not important to the decision. This is another example of the *timing* problem. If the technology company has great promise, it may make complete sense to acquire the business even though it is currently losing money. The proper way to evaluate the acquisition is by estimating the target's fair market value and acquiring it at a lower price. This is the topic of Chapter 9.

6. Your colleague's argument has a couple of holes in it. First, he has forgotten the *timing* problem. The investment has consequences over many years, and it is inappropriate to base the decision on only one year's results. As will be discussed beginning in Chapter 7, the appropriate rate of return for evaluating investment opportunities is not the division's accounting ROI but a rate that specifically incorporates the time value of money.

Second, your company's performance appraisal system is faulty. Investment return should be judged against a minimum acceptable return, not the division's historical return. An implication of the performance system used by your company is that divisions with very low returns will want to make lots of investments because many will promise returns higher than the division's ROI. Conversely, high return divisions, such as yours, will find few opportunities beating the division's ROI.

8. a. R&E Supplies, Inc. ratio analysis:

	2018	2019	2020	2021
Profitability ratios:				
Return on equity (%)	30.9	28.6	24.2	16.8
Return on assets (%)	11.3	10.3	7.7	5.0
Return on invested capital (%)	19.6	19.8	18.3	13.6
Profit margin (%)	3.3	2.9	2.4	1.4
Gross margin (%)	16.0	15.0	15.0	14.0
Turnover-control ratios:				
Asset turnover (X)	3.4	3.6	3.2	3.5
Fixed-asset turnover (X)	87.4	111.0	54.6	71.8
Inventory turnover (X)	8.4	8.5	7.1	7.8
Collection period (days)	43.8	47.4	47.5	51.1
Days' sales in cash (days)	21.9	14.6	14.6	7.3
Payables period (days)	39.1	45.0	64.7	66.1
Leverage and liquidity ratios:				
Assets to equity (%)	274.5	276.7	314.4	339.3
Total liabilities to assets (%)	63.6	63.9	68.2	70.5
Total liabilities to equity (%)	174.5	176.7	214.4	239.3
Long-term debt to equity (%)	80.5	65.4	54.3	43.9
Times interest earned (X)	5.9	6.2	5.6	5.3
Times burden covered (X)	*	3.5	3.5	3.1
Current ratio (X)	2.8	2.4	1.8	1.7
Acid test (X)	1.8	1.5	1.1	1.0

* Would require current portion long-term debt from 2017 in order to calculate.