LISBON SCHOOL OF ECONOMICS & MANAGEMENT
UNIVERSIDADE DE LISBOA

GESTÃO FINANCEIRA I & GESTÃO FINANCEIRA

CADERNO DE EXERCÍCIOS 2

Capítulo 2

Introduction to Financial Statement Analysis

(de BERK, DEMARZO e HARFORD'S "FUNDAMENTALS OF CORPORATE FINANCE")

LICENCIATURA

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Chapter 2

Introduction to Financial Statement Analysis

3. **Find the most recent annual financial statements for EDP – Energias de Portugal, SA (EDP.LS) using the following sources:**

   a. **From the company's Web site www.edp.pt (*Hint:* Search for "investor relations.")**

   b. **From the CMVM Web site www.cmvm.pt. (*Hint:* Search for company filings in the 'Information disclosure system' – securities issuers.)**

   c. **From the Yahoo! Finance Web site (http://finance.yahoo.com.*)***

   d. **From the Reuters Web site (http://www.reuters.com/finance/stocks.*)***

   e. **From at least one other source. (*Hint:* Enter "EDP financials" at www.google.com.)**

4. **Consider the following potential events that might have taken place at Vodafone Group Plc. on 31 March, 2013. For each one, indicate which line items in Vodafone's balance sheet would be affected and by how much. Also indicate the change to Vodafone's book value of equity. (In all cases, ignore any tax consequences for simplicity.)**

   a. **Vodafone used £20 million of its available cash to repay £20 million of its long-term debt.**
   b. **A warehouse fire destroyed £5 million worth of uninsured inventory.**
   c. **Vodafone used £5 million in cash and £5 million in new long-term debt to purchase a £10 million building.**
   d. **A large customer owing £3 million for products it already received declared bankruptcy, leaving no possibility that Vodafone would ever receive payment.**
   e. **Vodafone's engineers discover a new manufacturing process that will cut the cost of its flagship product by over 50%.**
   f. **A key competitor announces a radical new pricing policy that will drastically undercut Vodafone's prices.**

5. **What was the change in Global Conglomerate's book value of equity from 2011 to 2012 according to Table 2.1 (END OF THIS PROBLEM SET)? Does this imply that the market price of Global's shares increased in 2012? Explain.**

6. Use Google Finance (www.google.com/finance (or follow http://investor.qualcomm.com/secfiling.cfm?filingID=1234452-13-483#QCOM10-K2013_HTM_S52A88609CF665777F57BA8E37BBAD9C2) .

From the balance sheet at the end of September 2013, answer the following questions:

a. How much did Qualcomm have in cash and short-term investments?

b. What were Qualcomm's total accounts receivable?

c. What were Qualcomm's total assets?

d. What were Qualcomm's total liabilities? How much of this was long-term debt?

e. What was the book value of Qualcomm's equity?

7. Find the annual report for EDP Energias de Portugal, SA (EDP) online for 2014 (filed in December 2014). (for example follow: http://www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2014/Annual%20Report%202014/EDP_Annual_Report_2014_WEB.pdf).

Answer the following questions from their balance sheet:

a. How much cash did EDP have at the end of the fiscal year?

b. What were EDP's total assets?

c. What were EDP's total liabilities? How much debt did EDP have?

d. What was the book value of EDP's equity?

8. Find out the annual report for EDP Energias de Portugal, SA (EDP) for its 2014 fiscal year, filed in December 2014. Answer the following questions from the income statement:

a. What were EDP's revenues for 2014? By what percentage did revenues grow from 2013?

b. What were EDP's operating and net profit margins in 2014? How do they compare with its margins in 2013?

c. What were EDP's diluted earnings per share in 2014? What number of shares is this EPS based on?

9. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.

a. By what percentage did Mydeco's revenues grow each year from 2010 to 2013?

b. By what percentage did net income grow each year?

c. Why might the growth rates of revenues and net income differ?

10. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco repurchases 2 million shares each year from 2010 to 2013. What would its earnings per share be in 2013?

11. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco had purchased additional equipment for $12 million at the end of 2010, and this equipment was depreciated by $4 million per year in 2011, 2012, and 2013. Given Mydeco's tax rate of 35%, what impact would this additional purchase have had on Mydeco's net income in years 2010–2013?

12. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco's costs and expenses had been the same fraction of revenues in 2010–2013 as they were in 2009. What would Mydeco's EPS have been each year in this case?

13. Suppose a firm's tax rate is 40%.

a. What effect would a $5 million operating expense have on this year's earnings? What effect would it have on next year's earnings?

b. What effect would a $5 million capital expense have on this year's earnings if the capital is depreciated at a rate of $1 million per year for five years? What effect would it have on next year's earnings?

***14. Quisco Systems has 6.5 billion shares outstanding and a share price of $18. Quisco is considering developing a new networking product in house at a cost of $500 million. Alternatively, Quisco can acquire a firm that already has the technology for $900 million worth (at the current price) of Quisco stock. Suppose that absent the expense of the new technology, Quisco will have EPS of $0.80.**

a. Suppose Quisco develops the product in house. What impact would the development cost have on Quisco's EPS? Assume all costs are incurred this year and are treated as an R&D expense, Quisco's tax rate is 35%, and the number of shares outstanding is unchanged.
b. Suppose Quisco does not develop the product in house but instead acquires the technology. What effect would the acquisition have on Quisco's EPS this year? (Note the acquisition expenses do not appear directly on the income statement. Assume the acquired firm has no revenues or expenses of its own, so that the only effect on EPS is due to the change in the number of shares outstanding).
c. Which method of acquiring the technology has a smaller impact on earnings? Is this method cheaper? Explain.

15. Find online the 2012 annual report for Green Mountain Coffee Roasters (GMCR), filed in September 2012 (for example follow: http://www.sec.gov/Archives/edgar/data/909954/000110465912080228/a12-21067_110k.htm). Answer the following questions from its cash flow statement:

a. How much cash did Green Mountain generate from operating activities in 2012?

b. What was Green Mountain's depreciation expense in 2012?

c. How much cash was invested in new property and equipment (net of any sales) in 2012?

d. How much did Green Mountain raise from the sale of shares of its stock (net of any purchases) in 2012?

17. Suppose your firm receives a $5 million order on the last day of the year. You fill the order with $2 million worth of inventory. The customer picks up the entire order the same day and pays $1 million up front in cash; you also issue a bill for the customer to pay the remaining balance of $4 million within 40 days. Suppose your firm's tax rate is 0% (i.e., ignore taxes). Determine the consequences of this transaction for each of the following:

a. Revenues
b. Earnings
c. Receivables
d. Inventory
e. Cash

18. Nokela Industries purchases a $40 million cyclo-converter. The cyclo-converter will be depreciated by $10 million per year over four years, starting this year. Suppose Nokela's tax rate is 40%.

a. What impact will the cost of the purchase have on earnings for each of the next four years?
b. What impact will the cost of the purchase have on the firm's cash flow for the next four years?

19. In April 2013, General Electric (GE) had a book value of equity of $123 billion, 10.3 billion shares outstanding, and a market price of $23 per share. GE also had cash of $90 billion, and total debt of $397 billion.

a. What was GE's market capitalization? What was GE's market-to-book ratio?

b. What was GE's book debt-equity ratio? What was GE's market debt-equity ratio?

c. What was GE's enterprise value?

20. In April 2013, Apple had cash of $39.14 billion, current assets of $63.34 billion, and current liabilities of $35.51. It also had inventories of $1.25 billion.

a. What was Apple's current ratio?

b. What was Apple's quick ratio?

c. In April 2013, Dell had a quick ratio of 1.13 and a current ratio of 1.19. What can you say about the asset liquidity of Apple relative to Dell?

21. In mid-2012, the following information was true about Abercrombie and Fitch (ANF) and The GAP (GPS), both clothing retailers.

	Book Equity (millions of dollars)	Price per share (dollars)	Number of Shares (millions)
ANF	1,693	35.48	82.55
GPS	3,017	27.90	489.22

a. What is the market-to-book ratio of each company?

b. What conclusions do you draw from comparing the two ratios?

22. In fiscal year 2011, Starbucks Corporation (SBUX) had revenue of $11.70 billion, gross profit of $6.75 billion, and net income of $1.25 billion. Peet's Coffee and Tea (PEET) had revenue of $372 million, gross profit of $72.7 million, and net income of $17.8 million.

a. Compare the gross margins for Starbucks and Peet's.

b. Compare the net profit margins for Starbucks and Peet's.

c. Which firm was more profitable in 2011?

23. Local Co. has sales of $12 million and cost of sales of $5 million. Its selling, general and administrative expenses are $850,000, and its research and development is $1.5 million. It has annual depreciation charges of $1.2 million and a tax rate of 40%.

- **a. What is Local's gross margin?**
- **b. What is Local's operating margin?**
- **c. What is Local's net profit margin?**

24. If Local Co., the company in Problem 23, had an increase in selling expenses of $0.5 million, how would that affect each of its margins?

25. If Local Co., the company in Problem 23, had an interest expense of $500,000, how would that affect each of its margins?

26. Chutes & Co. has an interest expense of $1.8 million and an operating margin of 15% on total sales of $50 million. What is Chutes' interest coverage ratio?

27. Ladders, Inc. has a net profit margin of 8% on sales of $70 million. If has book value of equity of $50 million and total liabilities with a book value of $40 million. What is Ladders' ROE? ROA?

28. JPJ Corp has sales of $6 million, accounts receivable of $950,000, total assets of $25 million (of which $18 million are fixed assets), inventory of $860,000, and cost of goods sold of $2,200,000. What is JPJ's accounts receivable days? Fixed asset turnover? Total asset turnover? Inventory turnover?

29. If JPJ Corp. (the company form the previous question) is able to increase sales by 12% but keep its total and fixed asset growth to only 8%, what will its new asset turnover ratios be?

30. You are analyzing the leverage of two firms and you note the following (all values in millions of dollars):

	Debt	Book Equity	Market Equity	Operating Income	Interest Expense
Firm A	500	300	400	100	50
Firm B	80	35	40	8	7

- **a. What is the market debt-to-equity ratio of each firm?**
- **b. What is the book debt-to-equity ratio of each firm?**
- **c. What is the interest coverage ratio of each firm?**
- **d. Which firm may have more difficulty meeting its debt obligations?**

31. **For 2012, Walmart and Target had the following information (all values are in millions of dollars):**

	Sales (Income Statement)	Cost of Goods Sold (Income Statement)	Accounts Receivable (Balance Sheet)	Inventory (Balance Sheet)
Walmart	**469,162**	**352,488**	**6,768**	**43,803**
Target	**73,301**	**50,568**	**6,857**	**7,903**

   a. **What is each company's accounts receivable days?**

   b. **What is each company's inventory turnover?**

   c. **Which company is managing its accounts receivable and inventory more efficiently?**

33. **Consider a retail firm with a net profit margin of 5.5%, a total asset turnover of 2.4, total assets of $53 million, and a book value of equity of $25 million.**

   a. **What is the firm's current ROE?**

   b. **If the firm increased its net profit margin to 6%, what would its ROE be?**

   c. **If, in addition, the firm increased its revenues by 25% (while maintaining this higher profit margin and without changing its assets or liabilities), what would its ROE be?**

34. **Find online the annual report for EDP for its 2014 fiscal year, filed in December 2014.**

   a. **Compute EDP's net profit margin, total asset turnover, and equity multiplier.**

   b. **Verify the DuPont Identity for EDP's ROE.**

   c. **If EDP's managers wanted to increase its ROE by 1 percentage point, how much higher would their asset turnover need to be?**

Table 2.1 Global Conglomerate Corporation Balance Sheet for 2012 and 2011

GLOBAL CONGLOMERATE CORPORATION

Consolidated Balance Sheet
Year Ended December 31 (in $ million)

Assets	2012	2011
Current Assets		
Cash	21.2	19.5
Accounts receivable	18.5	13.2
Inventories	15.3	14.3
Other current assets	2.0	1.0
Total current assets	57.0	48.0
Long-Term Assets		
Land	22.2	20.7
Buildings	36.5	30.5
Equipment	39.7	33.2
Less accumulated depreciation	(18.7)	(17.5)
Net property, plant, and equipment	79.7	66.9
Goodwill and intangible assets	20.0	20.0
Other long-term assets	21.0	14.0
Total long-term assets	120.7	100.9
Total Assets	**177.7**	**148.9**

Liabilities and Stockholders' Equity	2012	2011
Current Liabilities		
Accounts payable	29.2	24.5
Notes payable/short-term debt	3.5	3.2
Current maturities of long-term debt	13.3	12.3
Other current liabilities	2.0	4.0
Total current liabilities	48.0	44.0
Long-Term Liabilities		
Long-term debt	99.9	76.3
Capital lease obligations	—	—
Total debt	99.9	76.3
Deferred taxes	7.6	7.4
Other long-term liabilities	—	—
Total long-term liabilities	107.5	83.7
Total Liabilities	**155.5**	**127.7**
Stockholders' Equity	**22.2**	**21.2**
Total Liabilities and Stockholders' Equity	177.7	148.9

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Table 2.5 2009–2013 Financial Statement Data and Stock Price Data for Mydeco Corp.

Mydeco Corp. 2009–2013	(All data as of fiscal year end; $ in millions)				
Income Statement	**2009**	**2010**	**2011**	**2012**	**2013**
Revenue	404.3	363.8	424.6	510.7	604.1
Cost of Goods Sold	(188.3)	(173.8)	(206.2)	(246.8)	(293.4)
Gross Profit	215.9	190.0	218.3	263.9	310.7
Sales and Marketing	(66.7)	(66.4)	(82.8)	(102.1)	(120.8)
Administration	(60.6)	(59.1)	(59.4)	(66.4)	(78.5)
Depreciation & Amortization	(27.3)	(27.0)	(34.3)	(38.4)	(38.6)
EBIT	61.3	37.4	41.8	57.0	72.8
Interest Income (Expense)	(33.7)	(32.9)	(32.2)	(37.4)	(39.4)
Pretax Income	27.7	4.5	9.6	19.6	33.4
Income Tax	(9.7)	(1.6)	(3.4)	(6.9)	(11.7)
Net Income	18.0	2.9	6.2	12.7	21.7
Shares Outstanding (millions)	55.0	55.0	55.0	55.0	55.0
Earnings per Share	$0.33	$0.05	$0.11	$0.23	$0.39
Balance Sheet	**2009**	**2010**	**2011**	**2012**	**2013**
Assets					
Cash	48.8	68.8	86.2	77.4	84.9
Accounts Receivable	88.6	69.8	69.8	76.9	86.1
Inventory	33.7	30.9	28.4	31.7	35.3
Total Current Assets	171.1	169.4	184.4	186.1	206.3
Net Property, Plant, & Equipment	245.3	243.2	308.9	345.5	347.0
Goodwill & Intangibles	361.7	361.7	361.7	361.7	361.7
Total Assets	778.1	774.3	855.0	893.3	914.9

(*Continued*)

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Mydeco Corp. 2009–2013 (All data as of fiscal year end; $ in millions)

Balance Sheet (continued)	2009	2010	2011	2012	2013
Liabilities & Stockholders' Equity					
Accounts Payable	18.7	17.9	22.0	26.8	31.7
Accrued Compensation	6.7	6.4	7.0	8.1	9.7
Total Current Liabilities	25.5	24.2	29.0	34.9	41.4
Long-Term Debt	500.0	500.0	575.0	600.0	600.0
Total Liabilities	525.5	524.2	604.0	634.9	641.4
Stockholders' Equity	252.6	250.1	251.0	258.3	273.5
Total Liabilities & Stockholders' Equity	778.1	774.3	855.0	893.3	914.9
Statement of Cash Flows	**2009**	**2010**	**2011**	**2012**	**2013**
Net Income	18.0	2.9	6.2	12.7	21.7
Depreciation & Amortization	27.3	27.0	34.3	38.4	38.6
Change in Accounts Receivable	3.9	18.8	(0.0)	(7.2)	(9.1)
Change in Inventory	(2.9)	2.9	2.5	(3.3)	(3.6)
Change in Payables & Accrued Compensation	2.2	(1.3)	4.8	5.9	6.5
Cash from Operations	48.4	50.4	47.8	46.6	54.0
Capital Expenditures	(25.0)	(25.0)	(100.0)	(75.0)	(40.0)
Cash from Investing Activities	(25.0)	(25.0)	(100.0)	(75.0)	(40.0)
Dividends Paid	(5.4)	(5.4)	(5.4)	(5.4)	(6.5)
Sale (or Purchase) of Stock	—	—	—	—	-
Debt Issuance (Pay Down)	—	—	75.0	25.0	-
Cash from Financing Activities	(5.4)	(5.4)	69.6	19.6	(6.5)
Change in Cash	18.0	20.0	17.4	(8.8)	7.5
Mydeco Stock Price	*$7.90*	*$3.29*	*$5.23*	*$8.70*	*$10.87*