GLOBAL EDITION

Principles of Managerial Finance

SIXTEENTH EDITION

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Principles of
Managerial Finance

Integrative Case 2

Epix Ltd.

Jeremy Cheah started Epix Ltd. in 2015 in Singapore. He had worked for more than 20 years in the electronic parts manufacturing and finally started a consultancy developing customized software for designing electronic parts. The firm soon established itself in the market and witnessed sustained growth over time. Jeremy and the senior management team are now planning to expand the operations of the firm. They are planning to develop new categories of software that can be customized for their clients and help them switch production from one part to another very quickly by combining design elements such as a module-based system that can be configured to different combinations.

Epix started business by developing its first software with a significant marketing campaign that resulted in losses in the first two years (2015 and 2016) of its operations. However, its profits have increased steadily since then. The firm's financial history, including dividend payment and contributions to retained earnings, is summarized in Table 1.

Jeremy started the firm with a $200,000 investment. He provided $100,000 from his own savings and borrowed the remaining $100,000 as a long-term loan from the bank. He owned 100% of his firm in the beginning but in 2016 sold 60% of the stock to a venture capitalist to raise more capital. This helped Epix tide over the initial cash shortage and reach break-even in 2017. Jeremy actively manages all the affairs of his business. The venture capitalist is not active in the day-to-day management. In 2018, Epix stock were valued at $9 per share and $10.56 per share in 2019.

TABLE 1

Epix Ltd. ($000s)
Profit Dividend and Retained Earnings, 2015–2019

Year	Net profits after taxes	Dividends paid	Contribution to retained earnings (Net Profit – Dividends)
2015	–100,000	0	–100,000
2016	–40,000	0	–40,000
2017	70,000	0	70,000
2018	86,000	6,000	80,000
2019	96,000	10,000	86,000

Jeremy has just finalized the Income Statement, Balance Sheet, and Statement of Retained Earnings for 2019, as shown in Tables 2, 3, and 4, respectively. He has also compiled key financial ratios using figures from 2018 and 2019 financial statements alongside the industry average ratios for 2019. Jeremy has confidence in the company's performance due to the recorded earnings of $96,000 in 2019. However, he is concerned about the firm's cash flow. He is increasingly finding it difficult to pay the firm's bills in a timely manner and generate cash flow for its investors—both shareholders and debtholders. Jeremy wants to determine the operating cash flow and free cash flow for the firm for the year 2019 to gain further insight into this problem.

Jeremy is further concerned about the firm's recent failure in recruiting a specialized software developer who is essential for developing the firm's new software. Jeremy is convinced that this new software has great potential and will increase the firm's revenue significantly. However, he is concerned that the expenditure of almost $160,000 per year on the salary of the required software developer will affect the firm's earnings per share for a few years and is therefore reluctant to recruit the said software developer.

With all these concerns in mind, Jeremy is reviewing the data in front of him to develop the strategic direction for Epix in the years to come. He is convinced that a thorough ratio analysis for the firm's 2019 financial performance would provide significant insights towards this objective.

TABLE 2

Epix Ltd. Income Statement ($ 000s) for the Year Ended December 31, 2019	
Sales revenue	3,100
Less: Cost of goods sold	2,060
Gross profits	1,040
Less: Operating expenses	
Selling expense	300
General and admin expenses	540
Depreciation expense	22
Total operating expense	862
Operating profits (EBIT)	178
Less: Interest expense	58
Net profits before taxes	120
Less: Taxes (20%)	24
Net profits after taxes	96

TABLE 3

Epix Ltd. Balance Sheet ($ 000s)		
Assets	**2019**	**2018**
Cash	24	62
Marketable securities	132	164
Accounts receivable	304	208
Inventories	382	290
Total current assets	842	724
Gross fixed assets	390	360
Less: Accumulated depreciation	126	104
Net fixed assets	264	256
Total assets	1,106	980
Liabilities and stockholders' equity		
Accounts payable	272	252
Notes payable	400	380
Accruals	54	50
Total current liabilities	726	682
Long-term debt	76	80
Total liabilities	802	762
Common Stock (50,000 shares at $0.80 par value)	40	40
Share premium	60	60
Retained earnings	204	118
Total stockholders' equity	304	218
Total liabilities and stockholders' equity	1,106	980

TABLE 4

Epix Ltd. Statement of Retained Earnings ($ 000s) for the Year Ended December 31, 2019	
Retained earnings balance (January 1, 2019)	118
Plus: Net profit after taxes (for 2019)	96
Less: Cash dividends on common stock (paid during 2019)	10
Retained earnings balance (December 31, 2019)	204

TABLE 5

Ratio	Actual 2018	Industry average 2019
Current ratio	1.06	1.82
Quick ratio	0.63	1.1
Inventory turnover	10.4	12.45
Average collection period	29.6 days	20.2 days
Total asset turnover	2.66	3.92
Debt ratio	0.78	0.55
Times interest earned ratio	3	5.6
Gross profit margin	32.10%	42.30%
Operating profit margin	5.50%	12.40%
Net profit margin	3.00%	4.00%
Return on total assets (ROA)	8.00%	15.60%
Return on common equity (ROE)	36.40%	34.70%
Price/earnings (P/E) ratio	5.20%	7.10%
Market/book (M/B) ratio	2.10%	2.20%

TO DO

a. Which financial goal is Jeremy focusing on? Explain if this is the correct goal or not.
b. Identify and explain any potential agency problem that may exist in this firm.
c. Calculate the firm's earning per share (EPS), recognizing that the number of issues and paid up shares has not changed since the firm's inception. Comment on the EPS performance referring to your comments in part a.
d. Use the financial data presented for 2019 to determine the operating cash flow (OCF) and the free cash flow (FCF) for Epix. Is Jeremy right in believing that Epix is having a cash problem?
e. Analyze the firm's financial condition in 2019 as it related to (1) liquidity, (2) activity, (3) debt, (4) profitability, and (5) market, using the data provided in Tables 2, 3, and 5.
f. What will be your recommendation to Jeremy regarding hiring the new software developer? Explain with reference to your answer to part a.
g. Epix paid $10,000 in dividends in 2019. If a new venture capitalist approached Jeremy and believed that by fully purchasing the company they could receive a cash amount of $10,000 every year in perpetuity, what do you think the investor would be willing to pay for the firm if the required return on this investment is 10%?
h. Let's assume that the FCF generated by Epix in 2019 will continue forever. You, as an investor, are now willing to buy the company in order to receive this perpetual stream of free cash flow. What are you willing to pay if you require a 12% return on your investment?

PART THREE

Valuation of Securities

CHAPTERS IN THIS PART

In Part Two, you learned how to use time-value-of-money tools to compare cash flows at different times. In Part Three, you will put those tools to use by valuing the two most common types of securities: bonds and stocks.

Chapter 6 introduces the world of interest rates and bonds. Although bonds are among the safest investments available, they are not without risk. The primary risk is that market interest rates will fluctuate. Those fluctuations cause bond prices to move, and those movements affect the returns that bond investors earn. Chapter 6 explains why interest rates vary from one bond to another and the factors that cause interest rates to move over time.

Chapter 7 focuses on stock valuation. It explains the characteristics of stock that distinguish it from debt and describes the differences between common and preferred stock. You'll have another chance to practice time-value-of-money techniques, as Chapter 7 illustrates how to value stocks by discounting either (1) the dividends that stockholders receive or (2) the free cash flows that the firm generates over time.