

Module 3

Measuring Corporate Performance

FINE 3010, Financial Management
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Goals

Measures to evaluate a corporation's performance,

- Shareholder value creation

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- Investment decisions
 - Asset efficiency
 - Profitability

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 - Asset efficiency
 - Profitability
- Financing decisions
 - Leverage
 - Liquidity

How Do We Evaluate a Corporation's Performance?

- Who needs to evaluate corporate performance?
 - Managers
 - Current investors
 - Prospective investors
 - Banks and lenders



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- Corporate performance is **multi-dimensional**

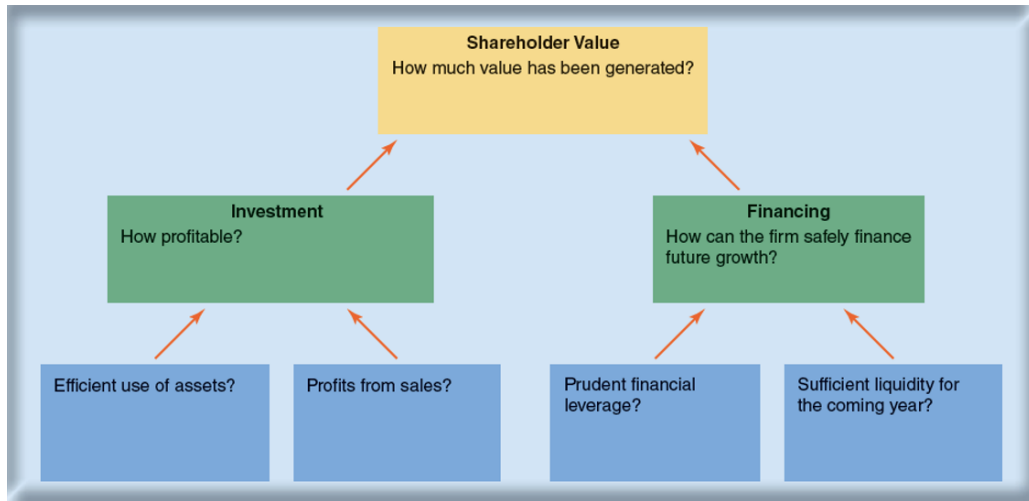


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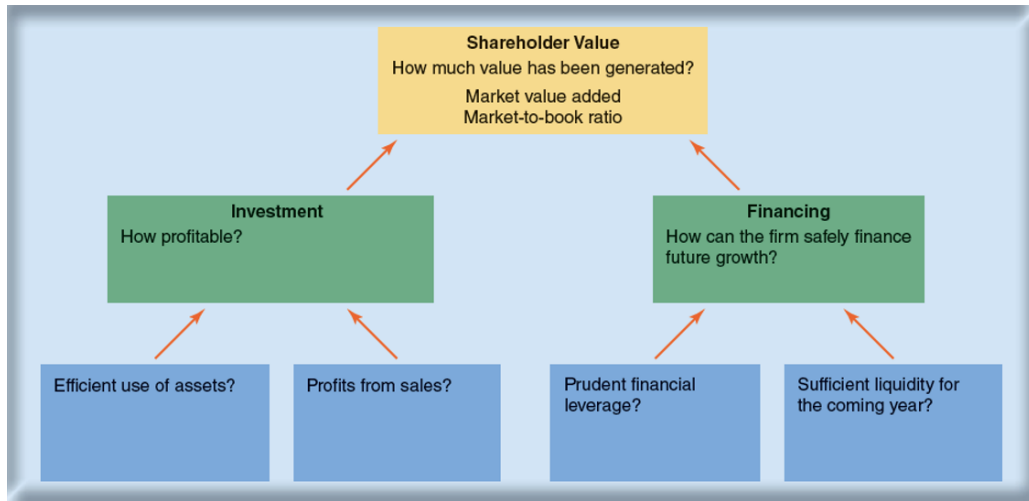
- Who needs to evaluate corporate performance?
 - Managers
 - Current investors
 - Prospective investors
 - Banks and lenders
- Corporate performance is **multi-dimensional**
- Different metrics matter to different users



Measuring Corporate Performance



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Module 3, Part 1

Shareholder Value and Investment

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- $\text{Market value added} = \text{Market capitalization} - \text{Book value of equity}$

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- Market capitalization = $\$29 \times 4.6 \text{ million}$ = \$133.4 million
- Market value added = $\$133.4 - \101.2 = \$32.2 million



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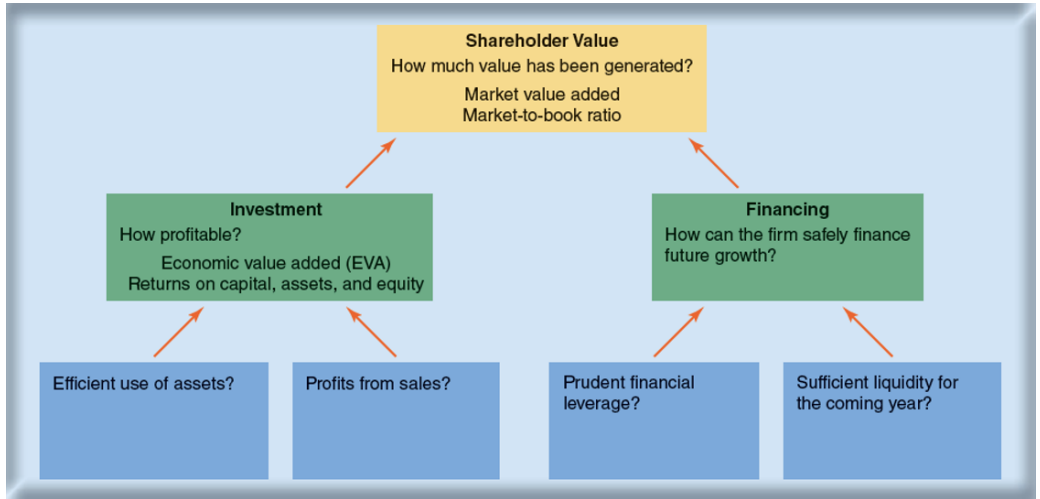
$$\text{Market-to-book} = \frac{\text{Market value of equity}}{\text{Book value of equity}}$$

- Interpretation,
 - Pros, closely tied to how actual investors value the company
 - Cons, subject to market fluctuations

Shareholder Value

Stock	Market Value Added (\$ Bn)	Market-to-Book Ratio
Microsoft	1,436	13.56
Apple	1,391	18.72
Procter & Gamble	252	6.65
Coca-Cola	175	10.62
Intel	173	3.26
Verizon	167	3.77
Adobe	127	13.08
Walt Disney	114	2.29
Lowe's	80	41.79
AT&T	36	1.20

Measuring Corporate Performance



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 - Also called residual income
- $EVA = \text{After-tax operating income} - \text{Cost of capital} \times \text{Total capitalization}$
- Idea, if generating the income requires a lot of capital, and that capital is expensive, the investment is not a good one

Investment, Economic Value Added (EVA)

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 - What net income would be if the firm were all-equity financed
 - Also called NOPAT, net operating profit after tax

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- Total capitalization = Long-term debt + Book value of equity
 - We compare this year's income to the *end of last year's* capital

Example, Target's Income Statement (Feb 2020, \$ Millions)

	\$ Million	% of Sales
Revenues	78,112	100.0%
Cost of goods sold	54,864	70.2%
Selling, general & administrative expenses	16,233	20.8%
Depreciation	2,357	3.0%
EBIT	4,658	6.0%
Other income	21	0.0%
Interest expense	477	0.6%
Taxable income	4,202	5.4%
Taxes	921	1.2%
Net income	3,281	4.2%
Allocation of net income		
Dividends	1,330	1.7%
Addition to retained earnings	1,951	2.5%

Example, Target's Balance Sheet (\$ Millions)

Assets	2020	2019	Liabilities and equity	2020	2019
Current assets			Current liabilities		
Cash and marketable sec.	2,577	1,556	Debt due for repayment	161	1,052
Accounts receivable	498	632	Accounts payable	9,920	9,761
Inventories	8,992	9,497	Other current liabilities	4,406	4,201
Other current assets	835	834	Total current liabilities	14,487	15,014
Total current assets	12,902	12,519	Long-term debt	11,338	10,223
Fixed assets			Other long-term liabilities	5,121	4,756
Tangible fixed assets			Total liabilities	30,946	29,993
Property, plant, equipment	48,183	46,185			
Less accum. depreciation	19,664	18,687	Shareholders' equity		
Net tangible fixed assets	28,519	27,498	Paid-in capital	6,268	6,085
Intangible asset (goodwill)	686	699	Retained earnings	5,565	5,212
Other assets	672	574	Total shareholders' equity	11,833	11,297
Total assets	42,779	41,290	Total liabilities and equity	42,779	41,290

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- After-tax operating income = $(1 - 0.21) \times \$477 + \$3,281 = \$3,658$

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 - Long-term debt and equity at the *end of last year*

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- After-tax operating income = $(1 - 0.21) \times \$477 + \$3,281 = \$3,658$
- Total capitalization = $\$10,223 + \$11,297 = \$21,520$
 - Long-term debt and equity at the *end of last year*
- EVA = $\$3,658 - (0.076 \times \$21,520) = \$2,022$
 - 0.076 is Target's cost of capital

Investment, Economic Value Added (EVA)

	(1) ATOI	(2) WACC %	(3) Capital	(4) EVA	(5) ROC %	(6) Excess %
Microsoft	46,328	9.3	168,992	30,659	27.4	18.1
Apple	59,681	10.3	182,295	40,900	32.7	22.4
Intel	21,297	8.1	102,812	12,994	20.7	12.6
Verizon	21,156	5.3	161,327	12,588	13.1	7.8
Adobe	5,352	7.9	11,519	4,436	46.5	38.5
Procter & Gamble	13,394	6.3	67,565	9,111	19.8	13.5
Coca-Cola	9,667	6.5	44,345	6,765	21.8	15.3
Lowe's	4,848	10.0	18,035	3,052	26.9	16.9
AT&T	1,085	5.6	333,658	-17,646	0.3	-5.3
Walt Disney	-1,563	8.8	127,006	-12,767	-1.2	-10.1

- ATOI, after-tax operating income (\$ millions). $EVA = (1) - (2) \times (3)$. $ROC = (1) / (3)$. Excess return = $(5) - (2)$. Year ending second quarter 2020

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- Interpretation,
 - Pros, less sensitive to stock market fluctuations
 - Cons, accounting values may deviate from real values, intangibles are hard to measure

Example, Target's Returns

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- ROC, ROA, and ROE are also commonly calculated with average values in the denominator

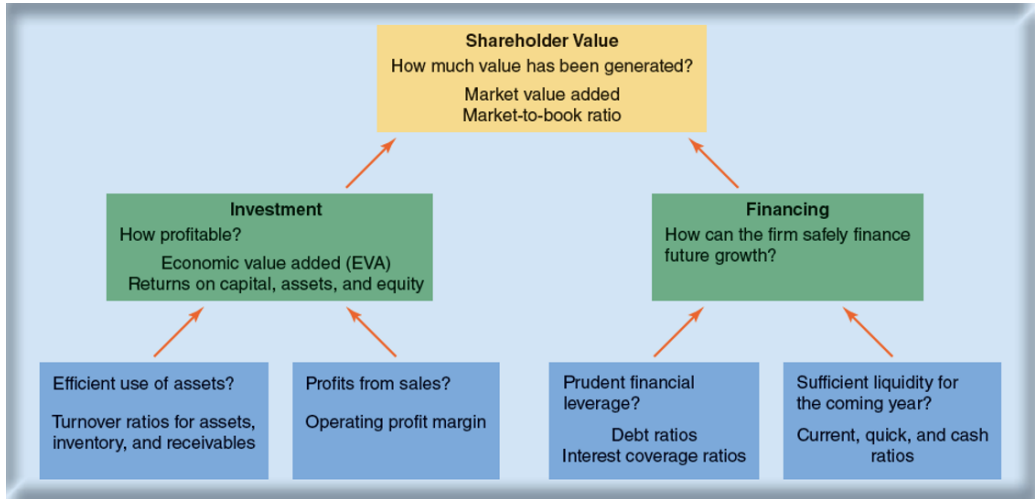
Recap of Part 1

- Shareholder value is measured with market value added and the market-to-book ratio
- The goal of a manager is to maximize shareholder value
- Investment profitability is measured with economic value added and the returns on capital, assets, and equity

Module 3, Part 2

Efficiency and Profitability

Measuring Corporate Performance



Efficiency, Use of Assets

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- Average between start-of-year and end-of-year assets
- If a firm's assets changed a lot over the year, use the second version

Efficiency, Inventory

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- The number of days the company could maintain operations from its current inventories

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- The average length of time for customers to pay their bills

Example, Target's Efficiency Ratios

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$$\text{Accounts receivable turnover} = \frac{78,112}{632} = 123.6$$

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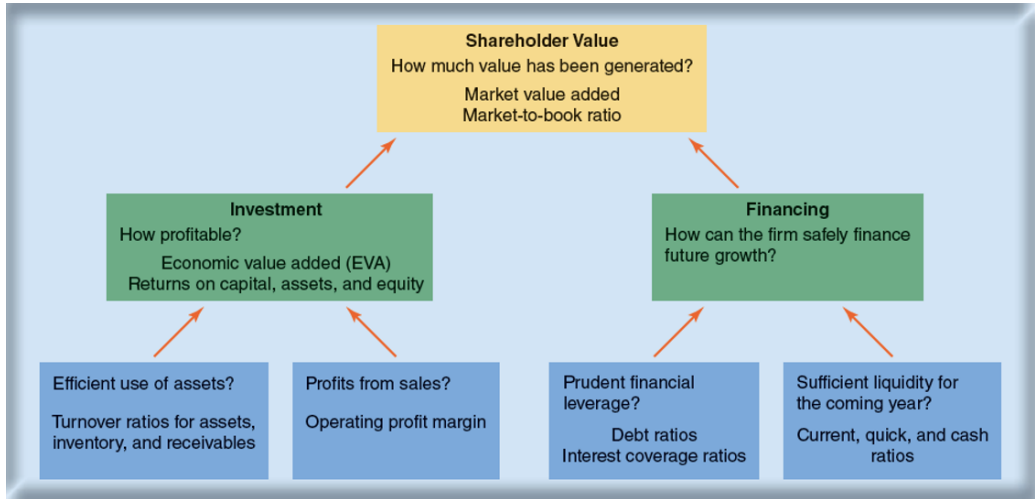
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$$\text{Accounts receivable turnover} = \frac{78,112}{632} = 123.6$$

$$\text{Average collection period} = \frac{632}{78,112/365} = 3.0 \text{ days}$$

Measuring Corporate Performance



Profits from Sales, Operating Profit Margin

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- I.e., $\text{ROA} = \text{Asset turnover} \times \text{Operating profit margin}$

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$$\text{ROA} = \frac{\text{sales}}{\text{assets}} \times \frac{\text{after-tax operating income}}{\text{sales}} = 1.89 \times 0.047 = 0.089$$

Decompose ROA

Company	Strategy	Asset Turnover	Op. Profit Margin	ROA (approx.)
Zara (Inditex)	Fast fashion	~1.5–1.7×	~7–8%	~11–13%
Hermès	Luxury fashion	~0.5–0.6×	~20–25%	~11–13%



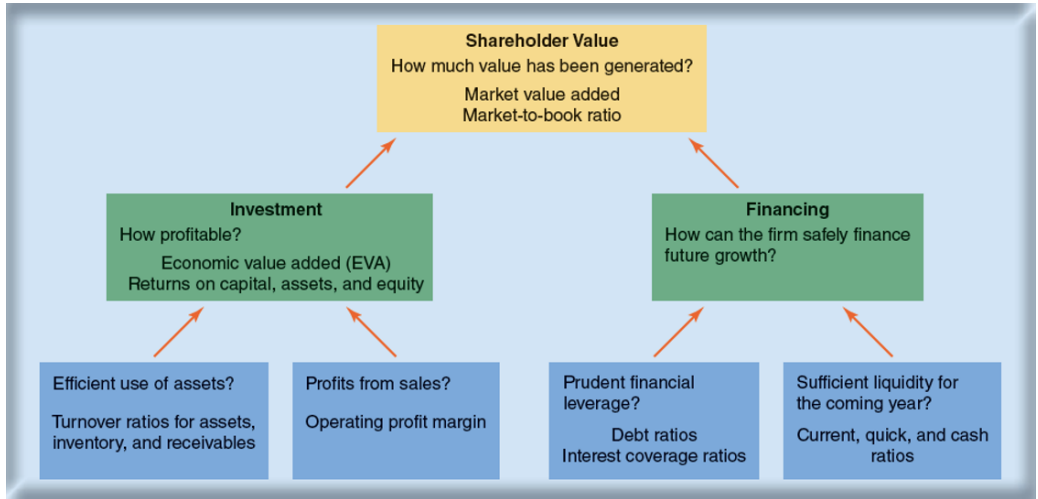
Recap of Part 2

- Turnover ratios measure efficiency, sales or costs relative to assets, inventory, and accounts receivable
- Profit margin = Net income / Sales
- Operating profit margin = After-tax operating income / Sales
- ROA = Asset turnover $\times$ Operating profit margin

Module 3, Part 3

Leverage and Liquidity

Measuring Corporate Performance



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- Debt increases returns to shareholders in good times and reduces them in bad times, so it is said to create **financial leverage**

Financial Leverage

$$\text{Long-term debt ratio} = \frac{\text{Long-term debt}}{\text{Long-term debt} + \text{Equity}}$$

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$$\text{Long-term debt-equity ratio} = \frac{\text{Long-term debt}}{\text{Equity}}$$

Example, Target's Leverage

$$\text{Long-term debt ratio} = \frac{11,338}{11,338 + 11,833} = 0.49$$

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- Interpretation, high financial leverage is a sign of trouble. Before the financial crisis, Lehman Brothers had a debt-to-equity ratio of 30

Example, Target's Leverage

$$\text{Total debt ratio} = \frac{\text{total liabilities}}{\text{total assets}} = \frac{30,946}{42,779} = 0.72$$

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$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{interest payments}} = \frac{4,658}{477} = 9.8$$

$$\text{Cash coverage ratio} = \frac{\text{EBIT} + \text{depreciation}}{\text{interest payments}} = \frac{4,658 + 2,357}{477} = 14.7$$

Decompose ROE (Supplementary)

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$$\text{ROE} = \underbrace{\frac{\text{assets}}{\text{equity}}}_{\text{Leverage ratio}} \times \underbrace{\frac{\text{sales}}{\text{assets}}}_{\text{Asset turnover}} \times \underbrace{\frac{\text{ATOI}}{\text{sales}}}_{\text{Operating profit margin}} \times \underbrace{\frac{\text{net income}}{\text{ATOI}}}_{\text{Debt burden}}$$

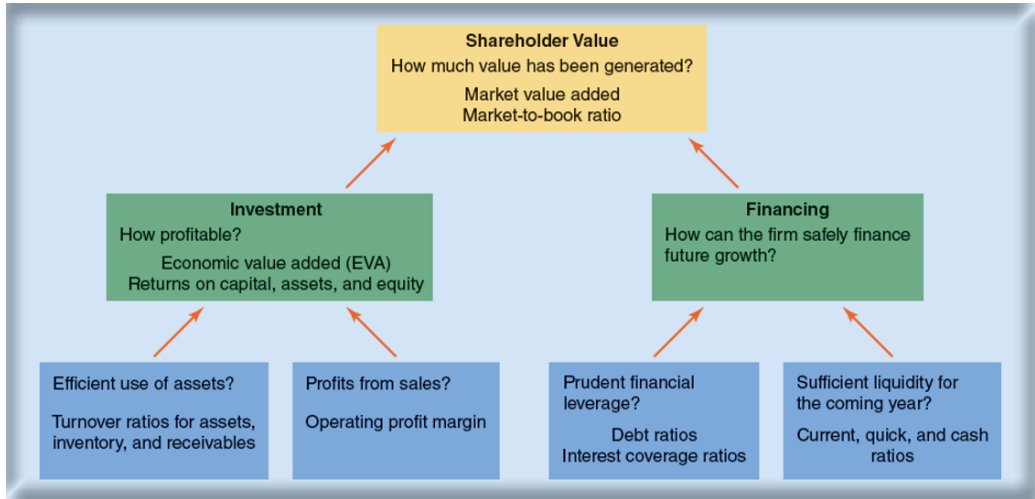
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- Leverage ratio ≥ 1 , debt burden ≤ 1
- ROE might be higher or lower than ROA, depending on which effect dominates

Measuring Corporate Performance



Financial Liquidity

- **Liquidity**, the ability to sell an asset on short notice at close to the market value



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- Liquid assets can be converted into cash quickly and cheaply



Financial Liquidity

- **Liquidity**, the ability to sell an asset on short notice at close to the market value
- Liquid assets can be converted into cash quickly and cheaply
- Liquidity metrics compare the amount of liquid assets to the amount of debt that requires immediate repayment



Example, Target's Balance Sheet (\$ Millions)

Assets, most liquid first	2020	2019	Liabilities and equity, paid first at top	2020	2019
Current assets			Current liabilities		
Cash and marketable sec.	2,577	1,556	Debt due for repayment	161	1,052
Accounts receivable	498	632	Accounts payable	9,920	9,761
Inventories	8,992	9,497	Other current liabilities	4,406	4,201
Other current assets	835	834	Total current liabilities	14,487	15,014
Total current assets	12,902	12,519	Long-term debt	11,338	10,223
Fixed assets			Other long-term liabilities	5,121	4,756
Tangible fixed assets			Total liabilities	30,946	29,993
Property, plant, equipment	48,183	46,185	Shareholders' equity		
Less accum. depreciation	19,664	18,687	Paid-in capital	6,268	6,085
Net tangible fixed assets	28,519	27,498	Retained earnings	5,565	5,212
Intangible asset (goodwill)	686	699	Total shareholders' equity	11,833	11,297
Other assets	672	574	Total liabilities and equity	42,779	41,290
Total assets	42,779	41,290			

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- Here $\text{NWC} = \text{Current assets} - \text{Current liabilities}$, so cash and the negative of short-term debt are part of it

Financial Liquidity

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}}$$

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- Interpretation, a low cash ratio might be a sign of trouble, but a very high cash ratio can mean the company is not deploying capital efficiently

Example, Target's Liquidity

$$\frac{\text{net working capital}}{\text{total assets}} = \frac{12,902 - 14,487}{42,779} = -0.037$$

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$$\frac{\text{cash} + \text{marketable securities}}{\text{current liabilities}} = \frac{2,577}{14,487} = 0.18$$

Interpreting Financial Ratios

Measure	Formula	Target	Walmart
Performance			
Market value added (\$ millions)	market value of equity – book value of equity	\$11,986	\$241,441
Market-to-book ratio	market value of equity / book value of equity	4.6	4.0
Profitability			
Return on assets (ROA)	after-tax operating income / total assets	8.9%	7.8%
Return on capital (ROC)	after-tax operating income / (long-term debt + equity)	17.0%	13.9%
Return on equity (ROE)	net income / equity	29.0%	19.1%
EVA (\$ millions)	after-tax operating income – cost of capital × capital	\$2,022	\$10,147

Interpreting Financial Ratios

Measure	Formula	Target	Walmart
Efficiency			
Asset turnover	sales / total assets at start of year	1.89	2.39
Accounts receivable turnover	sales / accounts receivable at start of year	123.6	83.4
Average collection period (days)	accounts receivable at start of year / daily sales	3.0	4.4
Inventory turnover	cost of goods sold / inventory at start of year	5.8	8.9
Days in inventory	inventory at start of year / daily cost of goods sold	63.2	40.9
Profit margin	net income / sales	4.2%	2.9%
Operating profit margin	after-tax operating income / sales	4.7%	3.3%

Interpreting Financial Ratios

Measure	Formula	Target	Walmart
Leverage			
Long-term debt ratio	long-term debt / (long-term debt + equity)	0.49	0.35
Long-term debt-equity ratio	long-term debt / equity	0.96	0.54
Total debt ratio	total liabilities / total assets	0.72	0.66
Times interest earned	EBIT / interest payments	9.8	8.5
Cash coverage ratio	(EBIT + depreciation) / interest payments	14.7	13.1
Liquidity			
Net working capital to assets	net working capital / total assets	-0.04	-0.07
Current ratio	current assets / current liabilities	0.89	0.79
Quick ratio	(cash + marketable securities + accounts receivable) / current liabilities	0.21	0.20
Cash ratio	(cash + marketable securities) / current liabilities	0.18	0.12

Remember

- For most measures, there is generally no “optimal” value to target
- Higher (or lower) is not even always better

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- Why?
 - There are trade-offs between measures
 - Industries and firms differ, the best policy depends on investment requirements, volatility of earnings, and more

Remember

- For most measures, there is generally no “optimal” value to target
- Higher (or lower) is not even always better
- Why?
 - There are trade-offs between measures
 - Industries and firms differ, the best policy depends on investment requirements, volatility of earnings, and more
- Still, we need to understand what these measures are, where they come from, and how to interpret them

Interpreting Financial Ratios, Industry Groups

	LTD/A	Cov.	Curr.	Quick	Turn.	PM%	ROA%	ROE%	Payout
All manufacturing	0.26	3.02	1.30	0.91	0.54	7.08	4.62	8.92	0.77
Food products	0.27	3.22	1.46	0.93	0.73	6.00	4.88	8.62	0.46
Clothing	0.27	-0.13	1.87	1.09	0.85	-0.23	0.77	-1.34	-7.70
Chemicals	0.31	3.98	1.17	0.90	0.35	17.47	6.96	15.21	0.56
Pharmaceuticals	0.33	5.10	1.20	0.97	0.30	23.98	8.26	20.12	0.51
Machinery	0.18	1.84	1.28	0.81	0.57	3.73	2.54	3.57	1.09
Computers & electronics	0.28	7.77	1.36	1.13	0.38	23.70	9.57	20.00	0.38
Motor vehicles	0.19	-0.25	1.26	0.92	0.97	-0.26	0.09	-2.05	-4.14
Aerospace	0.29	2.91	1.20	0.57	0.56	6.36	4.19	20.35	0.55
Furniture	0.32	5.22	1.71	1.15	1.19	8.01	9.96	24.89	0.19
Beverage & tobacco	0.39	6.54	1.01	0.76	0.31	23.40	7.11	17.72	0.81
Paper	0.30	3.07	1.30	0.90	0.75	6.99	5.85	11.62	0.61
Retail trade	0.23	5.71	1.14	0.75	1.75	3.32	6.96	18.35	0.41

- LTD/A, long-term debt over assets. Cov., interest coverage. Turn., asset turnover. PM, profit margin

Recap of Part 3

- Leverage ratios, how much debt the firm carries (debt ratios, times interest earned, cash coverage)
- Liquidity ratios, whether liquid assets can cover debt due soon (current, quick, and cash ratios)
- For most measures, there is no optimal value, interpretation depends on the industry and its trade-offs

Module 3, Part 4

Practice Problems

Practice Problem

- Here is a simplified balance sheet for Locust Farming (figures in \$ millions). Locust has 657 million shares outstanding with a market price of \$83 a share.

Current assets	\$42,524	Current liabilities	\$29,755
Long-term assets	46,832	Long-term debt	27,752
		Other liabilities	14,317
		Equity	17,532
Total	\$89,356	Total	\$89,356

- Calculate the company's market value added.
- Calculate the market-to-book ratio.

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- Calculate the company's market value added. $657 \times \$83 - \$17,532 = \$54,531 - \$17,532 = \$36,999$ million
- Calculate the market-to-book ratio.

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- Calculate the company's market value added. $657 \times \$83 - \$17,532 = \$54,531 - \$17,532 = \$36,999$ million
- Calculate the market-to-book ratio. $54,531 / 17,532 = 3.11$

Practice Problem

- Last year's return on equity was 30%. This year the ROE has decreased to 20%, even though the firm's net income equaled last year's. What caused the decrease?
 - a. Equity decreased by 10%.
 - b. Equity decreased by 50%.
 - c. Equity increased by 10%.
 - d. Equity increased by 50%.

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 - a. Equity decreased by 10%.
 - b. Equity decreased by 50%.
 - c. Equity increased by 10%.
 - d. Equity increased by 50%.
- Suppose net income is X in both years. Then equity last year $= X/30\%$ and equity this year $= X/20\%$, so equity this year / equity last year $= 30\%/20\% = 150\%$

Practice Problem

- A firm has a times interest earned ratio of 2, a tax liability of \$1 million, and interest expense of \$1.5 million. Its book value of equity is \$1.5 million. How much is its ROE?
- a. 26.67%
 - b. 30.00%
 - c. 33.33%
 - d. 50.00%

Practice Problem

- A firm has a times interest earned ratio of 2, a tax liability of \$1 million, and interest expense of \$1.5 million. Its book value of equity is \$1.5 million. How much is its ROE?
 - a. 26.67%
 - b. 30.00%
 - c. 33.33%
 - d. 50.00%
- Times interest earned = $\text{EBIT} / \text{Interest expense} = 2$, and interest expense = 1.5, so $\text{EBIT} = 3$
- Net income = $\text{EBIT} - \text{interest expense} - \text{taxes} = 3 - 1.5 - 1 = 0.5$
- $\text{ROE} = \text{Net income} / \text{Equity} = 0.5 / 1.5 = 33.33\%$

Practice Problem

- Which of the following will allow your firm to achieve its targeted 16% ROA with an asset turnover of 2.5?
 - a. A leverage ratio of 0.0667.
 - b. A P/E ratio of 14.
 - c. A return on equity of 25%.
 - d. An operating profit margin of 6.4%.

Practice Problem

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 - a. A leverage ratio of 0.0667.
 - b. A P/E ratio of 14.
 - c. A return on equity of 25%.
 - d. An operating profit margin of 6.4%.
- $ROA = \text{Asset turnover} \times \text{Operating profit margin}$, and $2.5 \times 6.4\% = 16\%$

Practice Problem

- Dots Incorporated had accounts receivable of \$940 at the beginning of the year and generated \$3,400 of sales during the year. How much is its average collection period?
 - a. 94 days
 - b. 95 days
 - c. 101 days
 - d. 107 days

Practice Problem

- Dots Incorporated had accounts receivable of \$940 at the beginning of the year and generated \$3,400 of sales during the year. How much is its average collection period?
 - a. 94 days
 - b. 95 days
 - c. 101 days
 - d. 107 days
- Average collection period = $940 / (3,400 / 365) = 101$ days

Practice Problem

- A firm has \$150,000 in accounts receivable, which represents 60 days' sales. Its assets are \$750,000, and its operating profit margin is 9%. How much is its ROA?
- a. 7.50%
 - b. 9.00%
 - c. 10.95%
 - d. 16.70%

Practice Problem

- A firm has \$150,000 in accounts receivable, which represents 60 days' sales. Its assets are \$750,000, and its operating profit margin is 9%. How much is its ROA?
 - a. 7.50%
 - b. 9.00%
 - c. 10.95%
 - d. 16.70%
- $\text{Annual sales} = (150,000 / 60) \times 365 = 912,500$
- $\text{Asset turnover} = 912,500 / 750,000 = 1.2167$
- $\text{ROA} = 1.2167 \times 9\% = 10.95\%$

Practice Problem

- Consider this simplified balance sheet for Geomorph Trading.

Balance Sheet (\$)			
Current assets	\$100	Current liabilities	\$60
Long-term assets	500	Long-term debt	280
		Other liabilities	70
		Equity	190
Total	\$600	Total	\$600

- What is the company's debt-equity ratio?
- What is the ratio of total long-term debt to total long-term capital?
- What is its net working capital?
- What is its current ratio?

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- What is the ratio of total long-term debt to total long-term capital?
 $\$280/(\$280 + 190) = 0.60$
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- What is its net working capital? $\$100 - 60 = \40
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 $\$280/(\$280 + 190) = 0.60$
- What is its net working capital? $\$100 - 60 = \40
- What is its current ratio? $\$100/\$60 = 1.67$

Practice Problem

- A firm has \$400,000 in debt, a total debt ratio of 0.4, and an asset turnover of 3. How much are its annual sales?
- a. \$333,333
 - b. \$1,200,000
 - c. \$1,800,000
 - d. \$3,000,000

Practice Problem

- A firm has \$400,000 in debt, a total debt ratio of 0.4, and an asset turnover of 3. How much are its annual sales?
 - a. \$333,333
 - b. \$1,200,000
 - c. \$1,800,000
 - d. **\$3,000,000**
- Total debt ratio = Total debt / Total assets, so $0.4 = \$400,000 / \text{Total assets}$, and total assets are \$1,000,000
- Asset turnover = Sales / Total assets = 3, so sales are \$3,000,000

Practice Problem

- Lever Age pays an 8% rate of interest on \$10 million of outstanding debt with face value \$10 million. The firm's EBIT was \$1 million.
 - a. What is its times interest earned?
 - b. If depreciation is \$200,000, what is its cash coverage ratio?

Practice Problem

- Lever Age pays an 8% rate of interest on \$10 million of outstanding debt with face value \$10 million. The firm's EBIT was \$1 million.
 - a. What is its times interest earned?
Interest expense = $0.08 \times \$10 \text{ million} = \$800,000$
Times interest earned = $\$1,000,000 / \$800,000 = 1.25$
 - b. If depreciation is \$200,000, what is its cash coverage ratio?

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 - b. If depreciation is \$200,000, what is its cash coverage ratio?
Cash coverage ratio = $(\$1,000,000 + \$200,000) / \$800,000 = 1.5$

Practice Problem

- Which one of the following will increase a firm's times interest earned ratio?
 - a. An increase in debt.
 - b. A decrease in cost of goods sold.
 - c. An increase in interest expense.
 - d. A decrease in net income.

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- An increase in which one of the following will have no effect on the cash coverage ratio?
 - a. Depreciation.
 - b. Interest.
 - c. Sales.
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Practice Problem

- An increase in which one of the following will have no effect on the cash coverage ratio?
 - a. Depreciation.
 - b. Interest.
 - c. Sales.
 - d. Cost of goods sold.
- Cash coverage = $(\text{EBIT} + \text{Depreciation}) / \text{Interest expense}$. If depreciation is higher, EBIT decreases and depreciation increases by the same amount, so $\text{EBIT} + \text{Depreciation}$ does not change

Practice Problem

- A firm uses \$1 million in cash to purchase inventories.
 - a. Will its current ratio rise or fall?
 - b. Will its quick ratio rise or fall?

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The current ratio is unaffected. Inventories replace cash, but total current assets are unchanged.
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Practice Problem

- A firm uses \$1 million in cash to purchase inventories.
 - a. Will its current ratio rise or fall?
The current ratio is unaffected. Inventories replace cash, but total current assets are unchanged.
 - b. Will its quick ratio rise or fall?
The quick ratio falls, since inventories are not included in the most liquid assets.

Practice Problem

- If a company has a healthy current ratio but a significantly lower quick ratio, then you can assume that,
 - a. the cost of goods sold represents more than half of sales.
 - b. current liabilities exceed current assets.
 - c. the firm sells only on a cash basis.
 - d. inventory represents a large portion of the firm's current assets.

Practice Problem

- If a company has a healthy current ratio but a significantly lower quick ratio, then you can assume that,
 - a. the cost of goods sold represents more than half of sales.
 - b. current liabilities exceed current assets.
 - c. the firm sells only on a cash basis.
 - d. inventory represents a large portion of the firm's current assets.
- The current ratio's numerator (current assets) includes inventories, the quick ratio's numerator does not

Practice Problem

- Which one of the following would be most detrimental to a firm's current ratio if that ratio is currently 2?
 - a. Collecting payment on an accounts receivable.
 - b. Selling marketable securities at cost.
 - c. Paying off accounts payable with cash.
 - d. Purchasing inventory on credit.

Practice Problem

- Which one of the following would be most detrimental to a firm's current ratio if that ratio is currently 2?
 - a. Collecting payment on an accounts receivable.
 - b. Selling marketable securities at cost.
 - c. Paying off accounts payable with cash.
 - d. Purchasing inventory on credit.
- The next slides work through each option with an example

Practice Problem

- We can think of an example,

Cash + marketable securities	0.5	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	0.5
Inventories	1		
Current assets	<u>2</u>	Current liabilities	<u>1</u>

Practice Problem

- We can think of an example,

Cash + marketable securities	0.5	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	0.5
Inventories	1		
Current assets	<u>2</u>	Current liabilities	<u>1</u>

- $\text{Current ratio} = \text{Current assets} / \text{Current liabilities} = 2$

Practice Problem

- Option a, cash rises and accounts receivable falls by the same amount, so current assets stay the same, and the current ratio stays the same

Practice Problem

- Option a, cash rises and accounts receivable falls by the same amount, so current assets stay the same, and the current ratio stays the same
- Option b, some marketable securities turn into cash, but cash + marketable securities stays the same, so the current ratio stays the same

Practice Problem

- Option c, suppose the firm pays down 0.5 of accounts payable, then

Cash + marketable securities	0	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	0
Inventories	1		
Current assets	1.5	Current liabilities	0.5

Practice Problem

- Option c, suppose the firm pays down 0.5 of accounts payable, then

Cash + marketable securities	0	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	0
Inventories	1		
Current assets	1.5	Current liabilities	0.5

- Current ratio = Current assets / Current liabilities = 3

Practice Problem

- Option d, suppose the firm acquires 1 of inventories on credit, then

Cash + marketable securities	0.5	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	1.5
Inventories	2		
Current assets	3	Current liabilities	2

Practice Problem

- Option d, suppose the firm acquires 1 of inventories on credit, then

Cash + marketable securities	0.5	Debt due for repayment	0.5
Accounts receivable	0.5	Accounts payable	1.5
Inventories	2		
Current assets	3	Current liabilities	2

- Current ratio = Current assets / Current liabilities = 1.5

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- Investment, EVA, the returns on capital, assets, and equity, turnover ratios, and margins
- Financing, leverage ratios and liquidity ratios
- For most measures, there is no optimal value to target

Thank you!

Please let me know if you have any questions.