Analyzing Financial Statements; Ratio Analysis

READ ANALYZING FINANCIAL STATEMENTS

The Income Statement and Balance Sheet

Income Statement

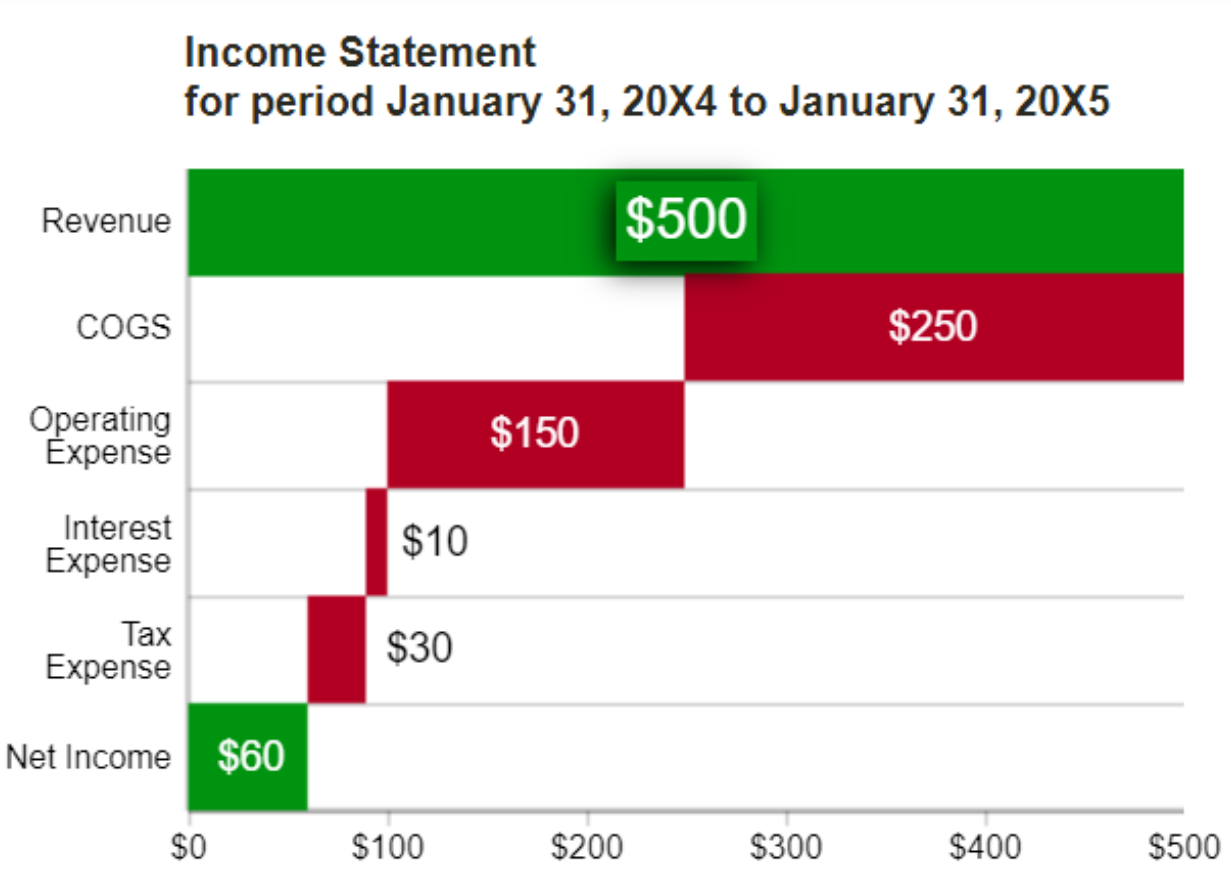
Balance Sheet

EPS

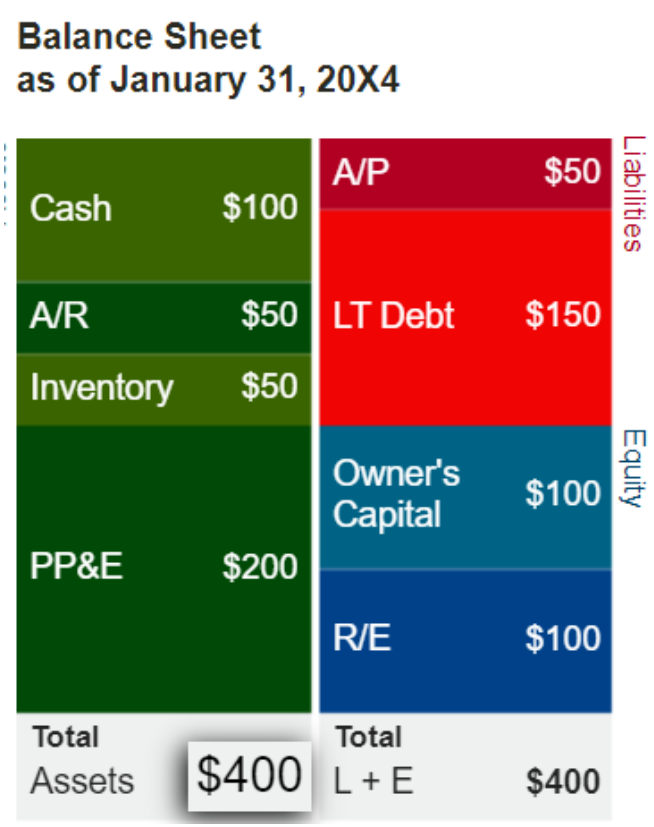
ROE

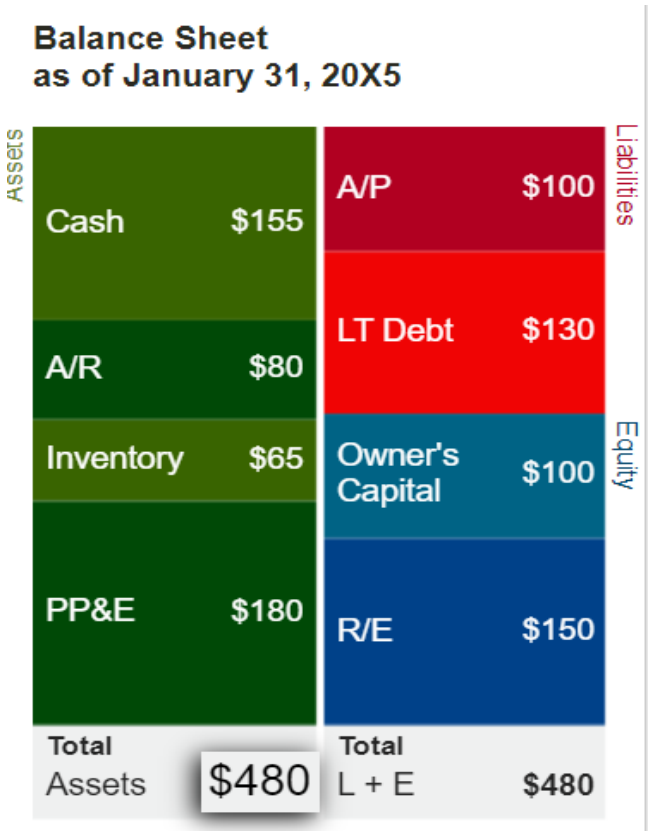
Capital Structure and Leverage

Income Statement – Over a year

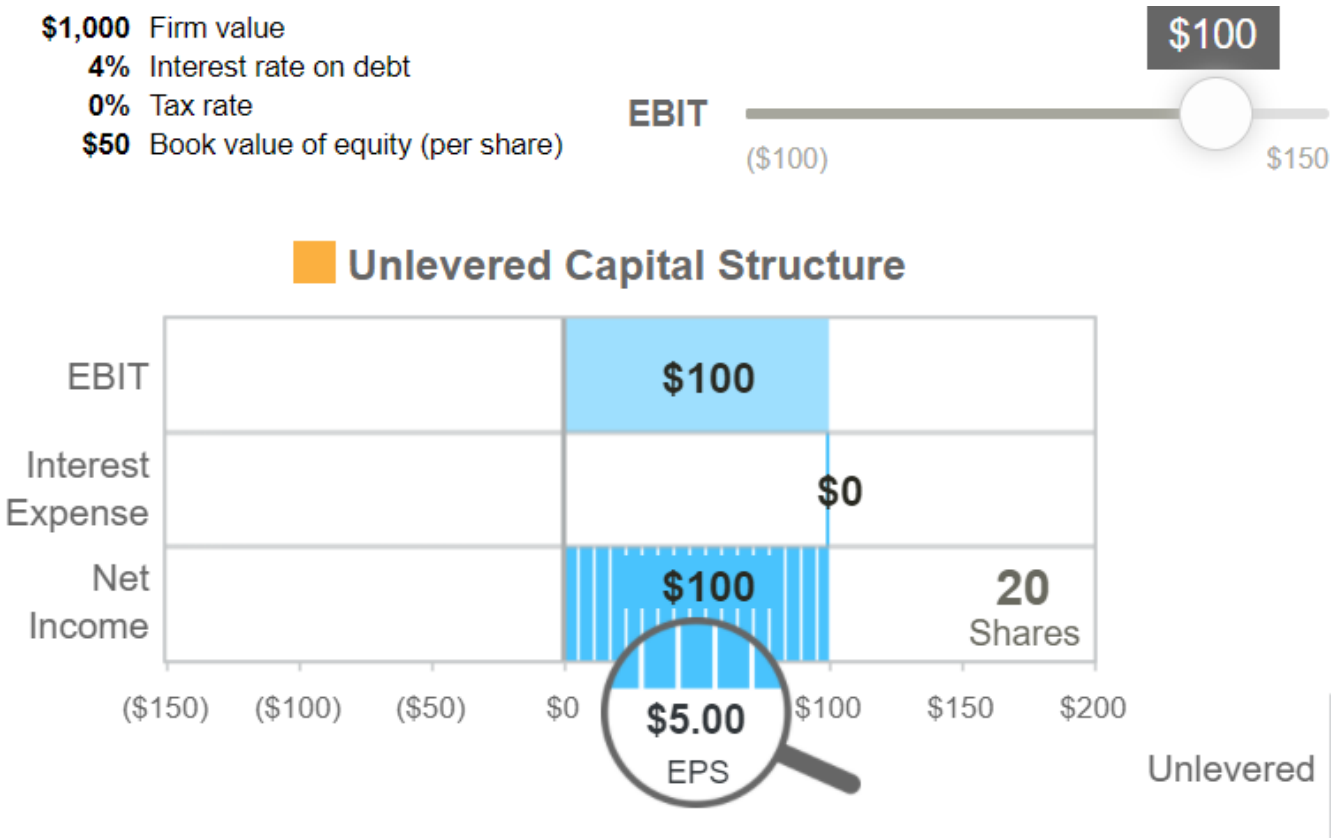


Balance Sheet – Snapshot Picture



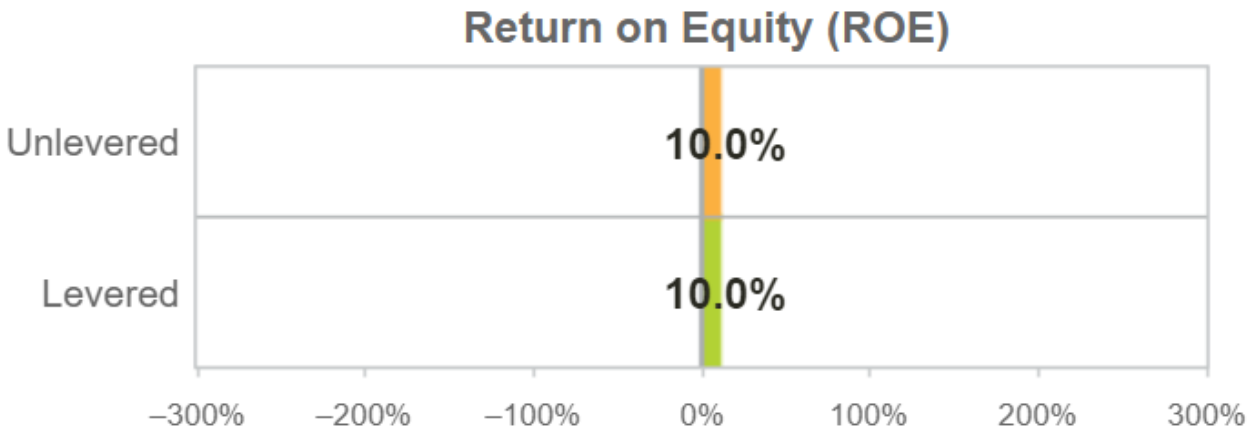


EPS = Net Income / # Shares = $100 / 20 = $5



ROE = EPS / BV of equity per share = $5 / $50 = 10%

$1,000 Firm value
4% Interest rate on debt
0% Tax rate
$50 Book value of equity (per share)



Unlevered vs. Leverage

Capital Structure – debt and equity

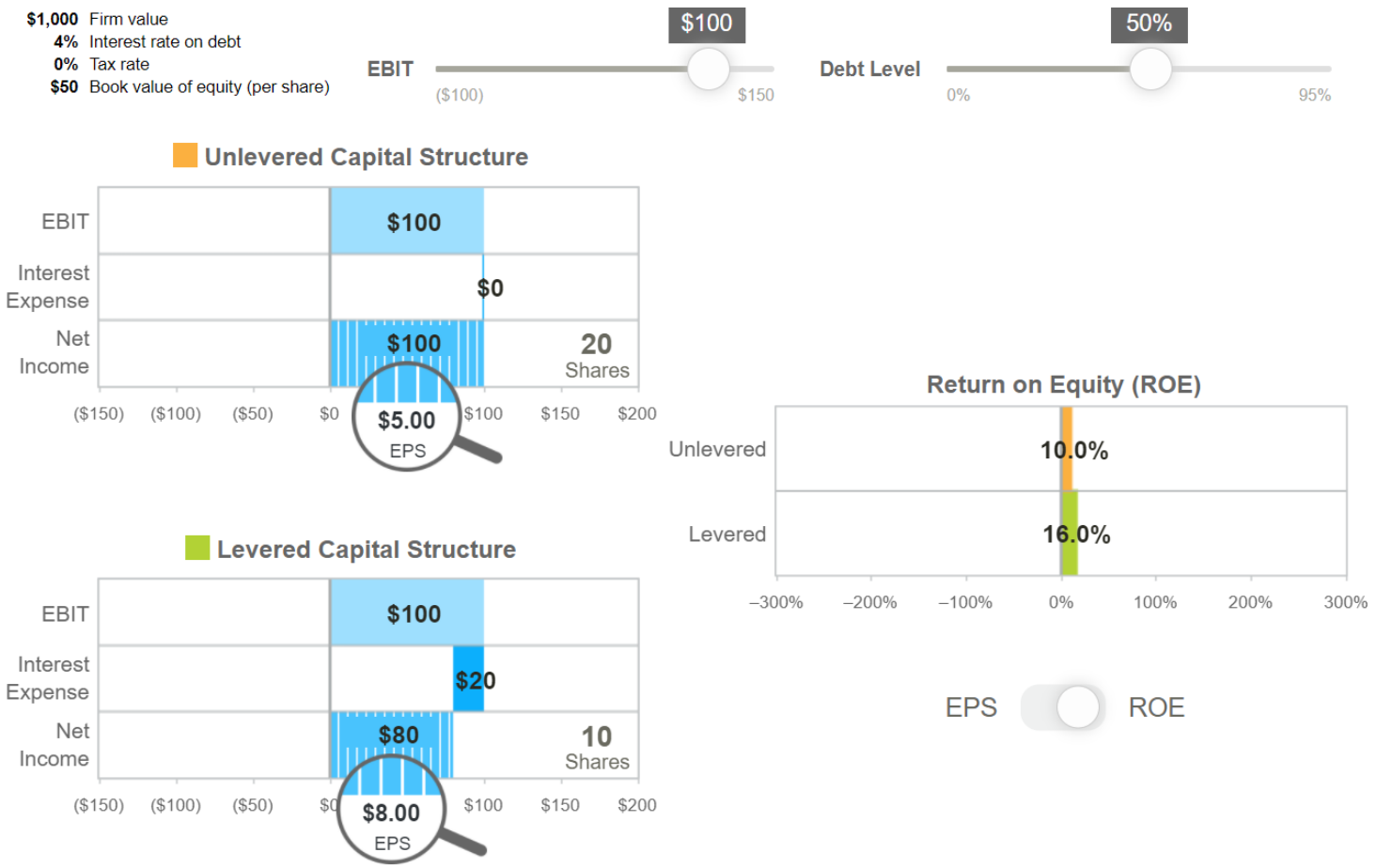
All equity, no debt = unlevered

Part equity / part debt = levered

Debt or leverage increases risk

so managers should deliver higher returns

Example: This firm used debt effectively to increase EPS & ROE



Financial Analysis & Company Performance

How well has the company executed its strategy?

How well is the company performing relative to competitors?

How do we analyze the performance?

- Over time
- Relative to other competitors or the industry

Retail Industry Example

Inditex Group (Industria de Diseno Textil)
- Spanish fashion retailer

Prada
- Luxury brand, Italian roots, headquarters in Hong Kong

The Gap
- U.S.

Nordstrom
- U.S.

Urban Outfitters
- U.S.

Financial Analysis Framework

ROE = NI / Equity

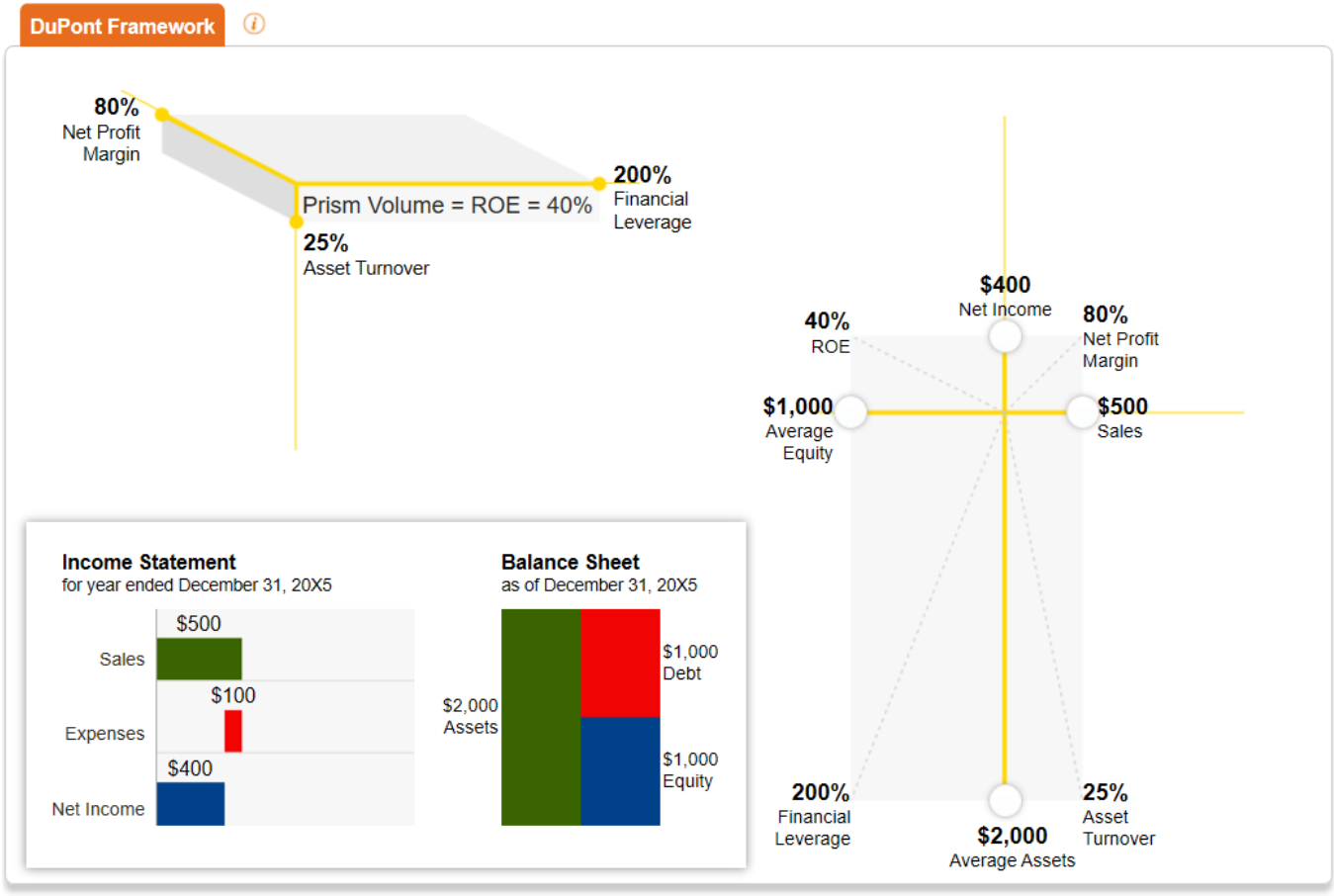
ROA = NI / Assets

DuPont Ratio – Breaks ROE into components:

- ROE = ROA * financial leverage
- ROE = net profit margin*Asset Turnover*leverage

40% ROE:

Margin = 80%, Asset Turnover = .25, Leverage = 2



What these ratios mean

ROE = 40%

- Profit of $40 for every $100 of equity

Net Margin = 80%

- Profit of $80 for every $100 of sales

Asset Turnover = .25

- $25 of sales for every $100 of assets

Leverage = 2

- $2 of assets for every $1 of equity (so $1 debt)

Compare Prada and Urban Outfitters

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
Net Profit Margin	7.7%	13.8%	5.3%	12.7%	7.0%

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
Asset Turnover	2.1	1.2	1.5	0.8	1.6

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
ROA	16.2%	17.2%	8.1%	10.4%	11.3%

Compare Prada and Urban Outfitters

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
ROA	16.2%	17.2%	8.1%	10.4%	11.3%

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
ROE	41.8%	25.4%	31.9%	15.8%	15.4%

Comparing Prada and Urban Outfitters

Net Margin for Prada at 12.7% substantially higher than Urban Outfitters at 7%

Urban Outfitters Asset Turnover at 1.6 is substantially higher than for Prada at .8

Prada, a luxury store, and Urban Outfitters have similar ROA.

Prada and Urban Outfitters also have similar ROE.

The DuPont Ratio and Capital Structure

2.4 Financial Leverage

ROE = ROA * A/E

A/ E called Equity Multiplier = (1 + financial Lev)

A / E = (E + D) / E = 1 + D/E

Managers can successfully use financial leverage to improve a company's performance if the return on borrowed funds is greater than the interest cost of those borrowed funds on an after-tax basis because interest cost is tax-deductible. The benefit of borrowing is that managers can operate from a larger asset base than the amount that would be financed only from shareholders' equity. For example, if a firm

Debt though also Increases Risk – Losses are Amplified too

The flip side of leverage is that the company becomes committed to meeting interest payments, whereas dividend payment to equity holders is discretionary. Borrowing can thus create a risk of financial distress when the firm's performance is depressed. If the business were to suffer a loss, the debt amplifies the loss's effect on equity holders. Therefore, companies should avoid very high levels of debt financing. Analysts use the extent of financial leverage to assess the leverage's benefit as well as to measure distress risk.

Using the ROE decomposition formula provided earlier, we can measure the impact of all non-equity financing—or any kind of debt—on the firm's ROE. If all the assets are financed by equity, the multiplier is 1. As debt increases, the equity multiplier also increases.

INTERACTIVE ILLUSTRATION 6 Leverage Ratios

Scan this QR code, click the image, or use this link to access the interactive illustration: bit.ly/hbsp2GiuO8Y

Financial Leverage: Is Nordstrom's level correct or too high? Prada?

FY 2015	**Gap**	**Inditex**	**Nordstrom**	**Prada**	**Urban Outfitters**
Equity Multiplier	2.6	1.5	3.9	1.5	1.4

Urban Outfitters and Prada's equity multipliers are quite similar—1.4 and 1.5, respectively—indicating that the two companies have similar capital structure strategies. However, Nordstrom has a high equity multiplier of 3.9. Recall that Nordstrom's ROE was 31.9%, significantly higher than Prada's 15.8%, despite Nordstrom's lower ROA (8.1%) compared to Prada's (10.4%). The answer lies in the significantly higher level of leverage as indicated by Nordstrom's equity multiplier, which is more than double Prada's. Can Prada improve its returns to shareholder equity (ROE) by taking on more debt? Prada's managers must grapple with this question. The answer would depend on the extent of financial risk they wish to take on. Alternately, should Nordstrom's shareholders be concerned that the company has very high debt levels? They would need to consider whether Nordstrom's business operations can support these high debt levels without causing the firm to slip into financial distress.

Interest Coverage Ratio = EBIT/Interest Expense

2.4.1 Interest Coverage Ratio

FY 2015	**Gap**	**Inditex**	**Nordstrom**	**Prada**	**Urban Outfitters**
Interest Coverage Ratio	28	N/A	11	54	N/A

Interest coverage ratio is useful for assessing the firm's long-term solvency by examining its ability to cover interest expense on debt, typically long-term debt. Nordstrom, with an interest coverage ratio of 11, has the lowest ability to meet its debt obligations within this sample of retailers. Although it is difficult to assess the extent of distress risk from this ratio alone, it is clear that Prada, with a ratio of 54, and Gap at 28, have a greater amount of earnings to cover interest expense. Because Urban Outfitters and Inditex did not incur much interest expense in 2015, their interest coverage ratios are less meaningful.

Interest Coverage – What it Means

Gap can cover each dollar of interest 28 times over based on its earnings.

Nordstrom can cover each dollar of interest 11 times over based on its earnings.

Prada can cover each dollar of interest 54 times over based on its earnings.

Working Capital: Short Term Assets and Liabilities

Cash Conversion Cycle = DSI + DSO – DP0

DSI = days supply in inventory

- Inventory management

DSO = days supply outstanding

- Accounts receivable management / collections

DPO = days payable outstanding

- What the company puts on credit / delay payment

Inventory Turnover and its Inverse Days Supply Inventory

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
Days Inventory Held	69	86	72	201	57

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
Days Sales Outstanding	8	7	61	34	7

FY 2015	Gap	Inditex	Nordstrom	Prada	Urban Outfitters
Days Payable Outstanding	44	115	56	119	24

Analysis

Days Supply in Inventory

Prada has the highest DSI as a luxury provider.

Days Sales Outstanding

Nordstrom has the highest DSO because it offers its own credit card.

Days Payables Outstanding

Gap and Urban Outfitters are paying off what they owe quickly. Their suppliers might be giving discounts to pay early.

Cash Conversion Cycle = DSI + DSO – DP0

2.3.6 Cash Conversion Cycle

The length of time between when a company must pay its suppliers for inventory until it collects cash from its customers is called the ***cash conversion cycle***. It is the sum of days inventory held plus days sales outstanding less days payable outstanding. A negative cash conversion cycle typically indicates that the business purchased goods from a supplier on credit and can sell the inventory and collect cash from the customer even before the supplier requires payment to be made.

Cash conversion cycle = days inventory + days sales outstanding – days payable outstanding

FY 2015	**Gap**	**Inditex**	**Nordstrom**	**Prada**	**Urban Outfitters**
Cash Conversion Cycle	33	(22)	77	116	39

Note: Inditex frees up cash as it takes longer to pays suppliers. Prada finances 116 days net of cash since it invests much in inventories.

Summary: Dig into Industry & Company; See how to improve

3 SUMMARY

The financial analysis framework provides a methodology for assessing and digging deeper into the drivers of a company's performance. Analysts and others can use financial ratios to compare the company's performance to its peers or to its own historical performance. Managers can then use the insights to improve the way the business operates, by improving either its profit margins, its asset utilization, or its capital structure. In this reading, we have used the DuPont decomposition framework to provide a basic structure for ratio analysis. There are many additional ratios not covered here, and you may find somewhat different definitions from what we have used here.