



ANALYZING FINANCIAL STATEMENTS

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- Three basic financial statement analysis techniques
 - Over-time (trend) analysis
 - Levels
 - Common size: express income statement line items as a percent of sales and balance sheet line items as a percent of total assets
 - DuPont analysis of return to shareholders (ROE)
 - Decompose ROE into three components capturing operating profitability [ROS], asset productivity [TAT] and leverage/how assets are financed [FL]
 - Firm-specific over-time analysis
 - Comparison to competitors
 - Cash conversion cycle (CCC)
 - Combined analysis of time to collect receivables [Net receivables/daily sales], time items spend in inventory [Inventory/daily CGS] and time to pay suppliers [Accounts payable/daily CGS]
 - Daily sales or daily CGS = amount of sales or CGS divided by 365
 - Firm-specific over-time analysis
 - Comparison to competitors

Using Financial Statement Information to Identify an Industry

- Refer to the “Identify the Industries” handout
- Think about the economics of the following types of companies and see if you can identify which companies the ratios came from:

- Auto Manufacturer
- Bank
- Pharmaceutical
- Hospital
- Computer Networking



Using Financial Statement Information to Identify an Industry

	1	2	3	4	5
<i>BALANCE SHEET (AS % OF TOTAL ASSETS)</i>					
Cash and Short-Term Investments	5.8	19.2	39.2	1.7	41.1
Receivables	41.0	10.9	46.9	16.1	7.6
Inventories - Total	6.6	7.9	—	3.7	3.2
Other Current Assets	3.0	3.0	—	7.5	7.4
Total Current Assets	56.5	41.0	86.1	29.0	59.3
Property, Plant, and Equipment - Total (Net)	19.6	27.8	1.4	47.5	7.9
Intangibles	5.6	0.5	3.6	11.2	26.3
Other Assets	18.3	30.7	8.9	12.3	6.5
Total Assets	100.0	100.0	100.0	100.0	100.0
Notes Payable	10.7	1.4	13.8	0.0	0.0
Accounts Payable	7.4	3.6	56.0	6.4	2.0
Other Current Liabilities	13.0	21.7	9.2	11.5	24.1
Total Current Liabilities	31.1	26.6	79.0	17.9	26.1
Long-Term Debt - Total	36.2	22.9	11.6	118.3	14.6
Other Noncurrent Liabilities	30.8	7.1	—	4.2	4.1
Total Liabilities	98.2	56.6	90.6	122.5	44.8
Total Preferred Stock	0.0	0.0	0.0	0.0	0.0
Total Common Equity	1.8	43.5	9.4	-40.4	55.2
Total Shareholders' Equity	1.8	43.5	9.4	-40.4	55.2
Total liabilities and shareholders' equity	100.0	100.0	100.0	100.0	100.0
<i>INCOME STATEMENT (AS % OF SALES)</i>					
Sales	100.00	100.00	100.00	100.00	100.00
Cost of Goods Sold or Operating Expenses	76.09	15.20	36.98	56.90	44.10
Selling and Administrative	8.40	30.15	—	24.90	27.00
Research and Development Expense	3.27	20.16	—	—	14.30
Depreciation and Amortization	6.69	4.45	—	4.63	2.50
Interest Expense	4.23	1.26	—	6.83	0.50
Income Taxes - Total	0.36	6.77	8.38	2.14	3.25
All other items	-0.02	-2.44	68.66	-0.53	8.35
Net Income (Loss)	0.98	24.45	22.96	5.13	19.60
<i>FINANCIAL RATIOS</i>					
Return on sales	1.0%	24.5%	23.0%	5.1%	19.6%
Gross margin	23.9%	84.8%	34.0%	43.1%	55.9%
Asset turnover	0.51	0.62	1.00	1.28	0.66
Return on assets	0.5%	15.3%	1.1%	6.6%	12.9%
Long-term debt/total capital	0.95	0.35	0.56	1.18	0.45

Trend Analysis – Income Statement

- Firms typically provide a summary but you could create on your own. What inferences can you draw?

SELECTED FINANCIAL DATA	Fiscal Year Ended				
	April 29, 2017	April 30, 2016	May 2, 2015	May 3, 2014 ⁽³⁾	April 27, 2013
(In thousands, except per share and footnote amounts)					
SUMMARY OF OPERATIONS					
Net sales	\$826,918	\$704,785	\$645,825	\$641,135	\$662,007
Cost of sales	500,841	463,348	426,685	423,480	444,757
Gross profit	326,077	241,437	219,140	217,655	217,250
Selling, general and administrative expenses	163,600	148,384	145,157	153,220	146,223
Interest expense	189	203	371	660	403
Other (income) expense - net	(537)	145	(1,101)	666	173
Income before income taxes	162,825	92,705	74,713	63,109	70,451
Provision for income taxes	55,780	31,507	25,402	19,474	23,531
Net income	\$107,045	\$ 61,198	\$ 49,311	\$ 43,635	\$ 46,920

Trend Analysis – Balance Sheet

- What inferences do you draw from the balance sheet information (the years are fiscal 2013 through fiscal 2017)?

BALANCE SHEET DATA

Cash and equivalents ⁽²⁾	\$136,372	\$105,577	\$ 52,456	\$ 29,932	\$ 18,267
Working capital ⁽²⁾	185,021	148,057	101,478	78,618	67,504
Property, plant and equipment - net	65,150	61,932	60,182	59,494	57,307
Total assets ⁽²⁾	357,889	305,498	247,750	222,841	208,642
Long-term debt	—	—	10,000	30,000	50,000
Deferred income tax liability	15,993	14,474	15,245	13,873	14,327
Shareholders' equity ⁽²⁾	245,618	206,152	147,782	106,201	70,316
Dividends paid on common stock ⁽²⁾	69,850	—	—	—	118,139

Selected Financial Data for Trending – Income Statement

– Common size information. Do any inferences change?

	2017	2016	2015	2014	2013
Net sales	100%	100%	100%	100%	100%
Cost of sales	61%	66%	66%	66%	67%
Gross Profit	39%	34%	34%	34%	33%
SG&A	20%	21%	22%	24%	22%
Interest expense	0%	0%	0%	0%	0%
other (income) expense - net	0%	0%	0%	0%	0%
Income before income taxes	20%	13%	12%	10%	11%
Provision for income taxes	7%	4%	4%	3%	4%
Net income	13%	9%	8%	7%	7%

National Beverage – MD&A

RESULTS OF OPERATIONS

Net Sales

Net sales for fiscal year ended April 29, 2017 (“Fiscal 2017”) increased 17.3% to \$826.9 million compared to \$704.8 million for fiscal year ended April 30, 2016 (“Fiscal 2016”). The increase in sales resulted primarily from a 16.6% increase in case volume and, to a lesser extent, a higher average selling price. Power+ Brands volume increased 42.6%; branded carbonated soft drinks volume was flat.

Net sales for Fiscal 2016 increased 9.1% to \$704.8 million compared to \$645.8 million for the fiscal year ended May 2, 2015 (“Fiscal 2015”). The higher sales resulted from a 9.0% increase in case volume and a slight increase in average selling price. The volume increase includes 31.4% growth of our Power+ Brands, partially offset by a decline in carbonated soft drinks.

Gross Profit

Gross profit for Fiscal 2017 increased 35.1% to \$326.1 million compared to \$241.4 million for Fiscal 2016. The increase in gross profit is due to increased volume, growth in higher margin Power+ Brands and a decline in cost of sales per case of 5.7%. The decline in cost of sales per case was due to favorable product mix changes and lower raw material costs. Gross margin expanded to 39.4%.

Gross profit for Fiscal 2016 increased 10.2% to \$241.4 million compared to \$219.1 million for Fiscal 2015. The increase in gross profit is primarily due to higher sales and a decline in cost of sales per case of .4%. The decrease in cost of sales per case was due to favorable product mix changes and lower raw material costs. As a result, gross margin improved to 34.3%.

Shipping and handling costs are included in selling, general and administrative expenses, the classification of which is consistent with many beverage companies. However, our gross margin may not be comparable to companies that include shipping and handling costs in cost of sales. See Note 1 of Notes to Consolidated Financial Statements.

Selling, General and Administrative Expenses

Selling, general and administrative expenses were \$163.6 million or 19.8% of net sales for Fiscal 2017, increasing \$15.2 million or 10.3% from Fiscal 2016. The increase was primarily due to shipping and other volume related expenses and marketing spending increases. As a percent of Net sales, Selling, general and administrative expenses decreased primarily due to the leveraging effects of higher volume on fixed costs and growth of products distributed by customer pick-up.

Selling, general and administrative expenses were \$148.4 million or 21.1% of net sales for Fiscal 2016 compared to \$145.2 million or 22.5% of net sales for Fiscal 2015. Fiscal 2016 expenses reflect higher distribution, selling and other volume related costs, partially offset by lower marketing costs.

Selected Financial Data for Trending – Balance Sheet

– Do any inferences change here? (Here all items are divided by total assets)

	2017	2016	2015	2014	2013
Cash and equivalents	38%	35%	21%	13%	9%
Working capital	52%	48%	41%	35%	32%
PP&E - net	18%	20%	24%	27%	27%
Total assets	100%	100%	100%	100%	100%
Long-term debt	0%	0%	4%	13%	24%
Deferred income tax liability	4%	5%	6%	6%	7%
Stockholders' equity	69%	67%	60%	48%	34%
Dividendes paid on common equity	20%	0%	0%	0%	57%

Comparing ROE for three firms

Return on Equity (ROE)

Fuqua Lemonade (2014)

National Beverage (2017)

Coca Cola (2017)

What drives the ROE differences?

DuPont Decomposition: $ROE = ROS \times TAT \times FL$

$$\underline{ROE = ROS \times TAT \times FL}$$

Fuqua Lemonade (2014)

National Beverage (2017)

Coca Cola (2017)

Insights:

DuPont Decomposition: $ROE = ROS \times TAT \times FL$

$$\underline{ROE = ROS \times TAT \times FL}$$

National Beverage (2017)

National Beverage (2013)

Insights:

Who has fastest cash conversion? Why?

Cash Conversion Cycle: $CCC = DSO + DIO - DPO$

$$\underline{CCC = DSO + DIO - DPO}$$

Fuqua Lemonade

National Beverage (2017)

Coca Cola (2017)

Insights:

Cash Conversion cycle analysis

Coca Cola's balance sheet combines Accounts payable with Accrued expenses in a single line item. Accrued expenses contains a heterogeneous aggregation of short-term item (current) liabilities. To find accounts payable, refer to Note 9.

NOTE 9: ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses consisted of the following (in millions):

December 31,	2017	2016
Accrued marketing	\$ 2,108	\$ 2,186
Trade accounts payable	2,288	2,682
Other accrued expenses	3,071	2,593
Accrued compensation	854	857
Deferred tax liabilities	— ¹	692
Sales, payroll and other taxes	347	372
Container deposits	80	108
Accounts payable and accrued expenses	\$ 8,748	\$ 9,490

National Beverage CCC; 2013 vs. 2017

Cash Conversion Cycle: $CCC = DSO + DIO - DPO$

$$\underline{CCC = DSO + DIO - DPO}$$

National Beverage (2017)

National Beverage (2013)

- Trends in line item levels and common size line items within a financial statement can help you observe changes over time
- Combining information in across financial statements can yield deeper insights into the return an investor receives (ROE) through a DuPont analysis
 - DuPont analysis can help explain across-firm and over-time differences in performance as measured by ROE.
- Combining information in across financial statements can yield deeper insights into cash management at the firm via analysis of the cash conversion cycle (CCC).
 - Cash conversion cycle analysis can explain across-firm and over-time differences in performance as measured by CCC.

Takeaways from Accounting Classes

Gain familiarity with:

- How accounting captures (or doesn't capture) economic transactions
- Accrual accounting versus cash accounting
- Line items in various financial statements (income statement, balance sheet and the statement of cash flows)
- Connection between the income statement and the balance sheet
- Different financial reporting venues (press releases vs annual report vs 10-Ks)
- Non-GAAP earnings (like EBITDA)
- Inferences from long run trends in financial data
 - Common size analysis
 - DuPont analysis
 - Analysis of cash conversion cycles