

AN INTRODUCTION TO
ECONOMICS, BUSINESS,
FINANCE AND INVESTING

UNDERSTANDING FINANCIAL STATEMENTS

WHITNEY TILSON | WTILSON@KASELEARNING.COM

GLENN TONGUE | GLENNT@KASELEARNING.COM

FINANCIAL STATEMENTS ARE A MIXTURE OF ART & SCIENCE

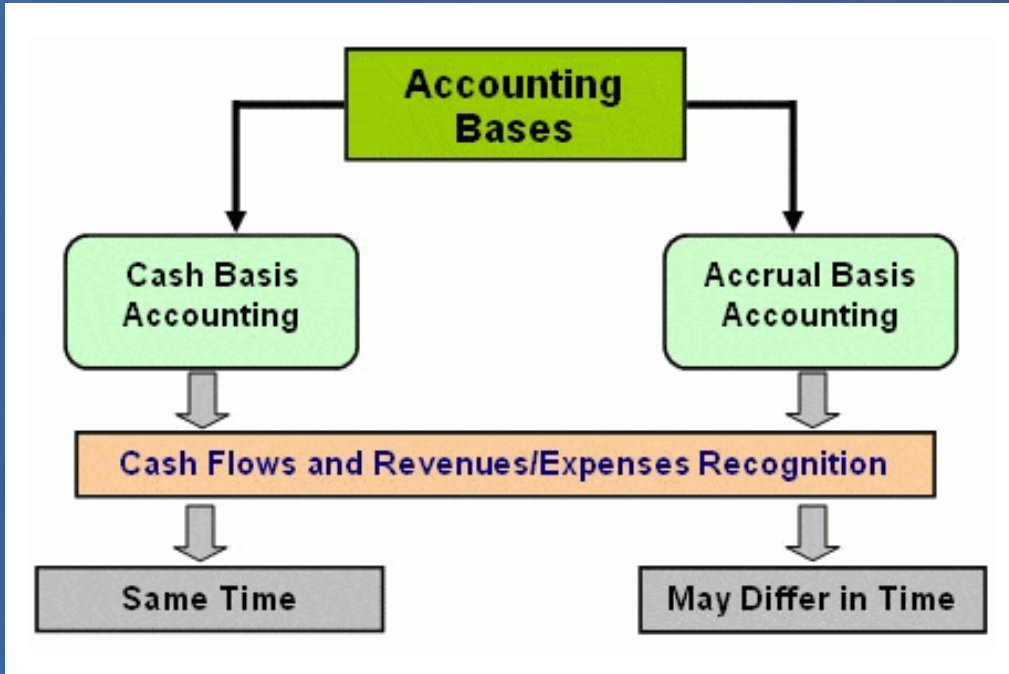
- Accounting requires many *judgments* and *estimations* by management
- Rules allow for *significant variation* in how to prepare and present results
- It is critical to understand incentives of management and accountants

Not enough to just follow the rules.
Financial statements must “...fairly present the financial position of the company”

“Regardless of how our businesses might be doing, [we] could – quite legally – cause net income in any given period to be almost any number we would like...”

– WARREN BUFFETT,
LETTER TO BERKSHIRE HATHAWAY
SHAREHOLDERS,
FEBRUARY 2011

ACCRUAL VS. CASH ACCOUNTING



- All accounting you will see is accrual

FINANCIAL FILINGS CONTAIN MORE THAN JUST FINANCIAL STATEMENTS

- Financial Statements
- Management Discussion & Analysis (MD&A)
- Audit Reports
- Footnotes

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended October 31, 2011

Or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission file number 1-4423

HEWLETT-PACKARD COMPANY
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

94-1081436
(T.R.S. employer identification no.)

3000 Hanover Street, Palo Alto, California
(Address of principal executive offices)

94304
(Zip code)

Registrant's telephone number, including area code: (650) 857-1501

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock, par value \$0.01 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

INFORMATION IS PRESENTED THROUGH THREE FINANCIAL STATEMENTS

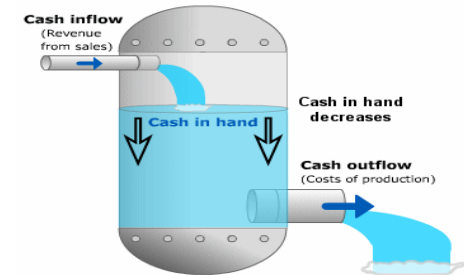
INCOME STATEMENT

	2004	2005	Current Year 2006
Revenues	10,000	10,000	10,000
Cost of Goods Sold	4,000	4,000	4,000
Selling, general and administrative expenses	2,500	2,500	2,500
Depreciation	1,500	1,500	1,500
Amortization of goodwill	0	0	0
Interest expense, net	1,000	1,000	1,000
Total costs and expenses	9,000	9,000	9,000
Provision for income taxes	(200)	(200)	(200)
Income before extraordinary items	700	700	700
Extraordinary items	0	0	0
Net income	700	700	700
Shares outstanding	10,000	10,000	10,000
Earnings per share (EPS) before extraordinary items	0.07	0.07	0.07
Earnings per share (EPS)	0.07	0.07	0.07
Dividends	(200)	(200)	(200)
Exercise of Stock Options	0	0	0
Shares issued	0	0	0
Foreign Currency Adjustment	0	0	0

BALANCE SHEET



STATEMENT OF CASH FLOWS



THE INCOME STATEMENT TELLS THE STORY FOR A CERTAIN PERIOD

REVENUE

(WHAT THE COMPANY SOLD
TO CUSTOMERS)

-

EXPENSES

(WHAT IT COST
TO RUN THE COMPANY)

=

NET INCOME

(PROFIT, EARNINGS,
THE BOTTOM LINE)
(WHAT'S LEFT OVER
FOR OWNERS)

Tells what happened to the company over a certain period of time

MATCHING PRINCIPLES

- Revenues are reported when the service is performed or the goods are delivered
 - Not when payment is received
- Associated expenses are recognized alongside the revenues
 - Not when expenses are paid
 - Example: a lawyer does \$5,000 of work in December, bills the client in January, and the client pays the bill in February. The \$5,000 in revenue and associated expenses appear on the December income statement.

THE INCOME STATEMENT

Every company is different but follows same general format...

- SALES (REVENUE OR THE “TOP LINE”)
- COST OF SALES (COGS)

DIRECT COST
OF GOODS
PROVIDED TO
CUSTOMERS



GROSS PROFIT

- SG&A, R&D, MARKETING EXPENSES, ETC

OPERATING INCOME

- +/- INTEREST EXPENSE / INCOME

PRE-TAX INCOME

- TAX

NET INCOME (“BOTTOM LINE”)

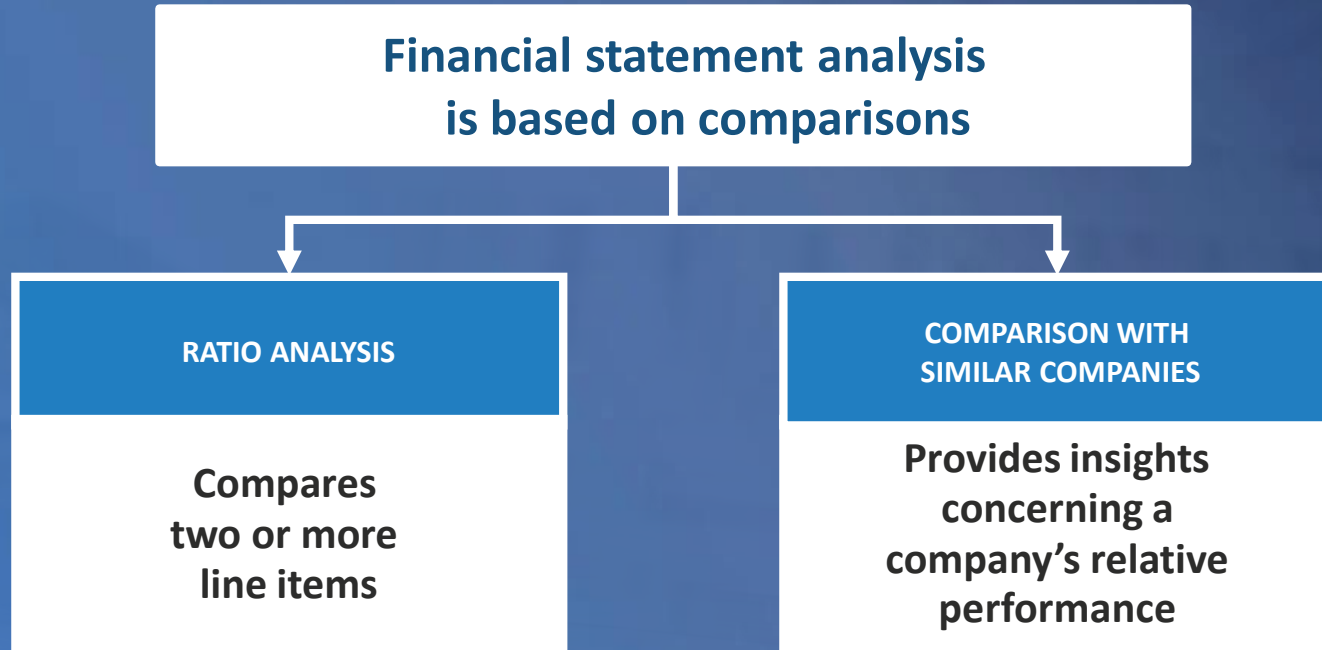
Apple Inc.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Three Months Ended		Six Months Ended	
	March 31, 2018	April 1, 2017	March 31, 2018	April 1, 2017
Net sales	\$ 61,137	\$ 52,896	\$ 149,430	\$ 131,247
Cost of sales	37,715	32,305	92,096	80,480
Gross margin	23,422	20,591	57,334	50,767
Operating expenses:				
Research and development	3,378	2,776	6,785	5,647
Selling, general and administrative	4,150	3,718	8,381	7,664
Total operating expenses	7,528	6,494	15,166	13,311
Operating income	15,894	14,097	42,168	37,456
Other income/(expense), net	274	587	1,030	1,408
Income before provision for income taxes	16,168	14,684	43,198	38,864
Provision for income taxes	2,346	3,655	9,311	9,944
Net income	\$ 13,822	\$ 11,029	\$ 33,887	\$ 28,920
Earnings per share:				
Basic	\$ 2.75	\$ 2.11	\$ 6.69	\$ 5.50
Diluted	\$ 2.73	\$ 2.10	\$ 6.63	\$ 5.46
Shares used in computing earnings per share:				
Basic	5,024,877	5,225,791	5,068,877	5,262,226
Diluted	5,068,493	5,261,688	5,113,140	5,294,841
Cash dividends declared per share	\$ 0.63	\$ 0.57	\$ 1.26	\$ 1.14

Apple, Inc. Income Statement

FINANCIAL STATEMENT ANALYSIS



INDICATORS, NOT ABSOLUTES

- Ratios will vary because of the company's industry characteristics, nature of operations, size, growth rates, macro economic factors, international dynamics, accounting policies, etc.

Ratios
point out
areas to
question

COMPONENT ANALYSIS: MARGINS

- The gross margin ($\text{gross profit} / \text{revenues}$) shows how much of a mark-up above its costs a company takes
- The difference between the gross and operating margin ($\text{operating profit} / \text{revenues}$) reveals a company's cost structure and how well it controls costs
- The net margin ($\text{net income} / \text{revenues}$) is most important, as it shows a company's ability to generate a profit

COMPONENT ANALYSIS: GROWTH RATES

- Calculating growth rates over time of revenues and net income shows a company's rate and consistency of top-line growth, and whether and how that is translating into profits
- Calculated by dividing current period vs. prior one
 - Revenues growing from \$10 to \$12 is 20% growth, calculated as follows:
 $12/10 = 1.2$, drop the 1 = .2, move the decimal place = 20%

EXERCISE

- For both Apple and Costco, calculate:
 - Current period gross margin (gross profit divided by revenue)
 - In the case of Costco, must first calculate gross profit by subtracting “Merchandise costs” from revenues
 - Current period net margin (net profit divided by revenue)
 - Year-over-year revenue growth
 - Year-over-year net income growth

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Apple Income Statement

COSTCO WHOLESALE CORPORATION
CONSOLIDATED STATEMENTS OF INCOME
(amounts in millions, except per share data)

	53 Weeks Ended September 3, 2017	52 Weeks Ended August 28, 2016	52 Weeks Ended August 30, 2015
REVENUE			
Net sales	\$ 126,172	\$ 116,073	\$ 113,666
Membership fees	2,853	2,646	2,533
Total revenue	129,025	118,719	116,199
OPERATING EXPENSES			
Merchandise costs	111,882	102,901	101,065
Selling, general and administrative	12,950	12,068	11,445
Preopening expenses	82	78	65
Operating income	4,111	3,672	3,624
OTHER INCOME (EXPENSE)			
Interest expense	(134)	(133)	(124)
Interest income and other, net	62	80	104
INCOME BEFORE INCOME TAXES	4,039	3,619	3,604
Provision for income taxes	1,325	1,243	1,195
Net income including noncontrolling interests	2,714	2,376	2,409
Net income attributable to noncontrolling interests	(35)	(26)	(32)
NET INCOME ATTRIBUTABLE TO COSTCO	\$ 2,679	\$ 2,350	\$ 2,377
NET INCOME PER COMMON SHARE ATTRIBUTABLE TO COSTCO:			
Basic	\$ 6.11	\$ 5.36	\$ 5.41
Diluted	\$ 6.08	\$ 5.33	\$ 5.37
Shares used in calculation (000's)			
Basic	438,437	438,585	439,455
Diluted	440,937	441,263	442,716
CASH DIVIDENDS DECLARED PER COMMON SHARE	\$ 8.90	\$ 1.70	\$ 6.51

Costco Income Statement

BALANCE SHEET IS A SNAPSHOT OF WHERE A COMPANY IS AT A PARTICULAR INSTANT IN TIME

ASSETS

(WHAT YOU OWN)

-

LIABILITIES

(WHAT YOU OWE)

=

EQUITY

(WHAT YOU ARE "WORTH")

The balance sheet must always balance

If: $A - L = E$

then: $A = L + E$

At any single point in time



BALANCE SHEET ITEMS

- Assets: ***economic resources*** of a business that are expected to benefit ***future*** operations
- Liabilities: ***obligations*** of the business (monetary or nonmonetary)
 - Trade related
 - Debt
- Stockholders' Equity represents the equity stake of a firm's equity investors
 - Paid-in capital: equity invested by owners
 - Retained earnings: accumulated profits
 - Equity is reduced by net income losses and when capital is paid out to owners in the form of dividends and share repurchases

Apple Inc.

CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

(In millions, except number of shares which are reflected in thousands and par value)

	<u>March 31, 2018</u>	<u>September 30, 2017</u>
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 45,059	\$ 20,289
Short-term marketable securities	42,881	53,892
Accounts receivable, less allowances of \$60 and \$58, respectively	14,324	17,874
Inventories	7,662	4,855
Vendor non-trade receivables	8,084	17,799
Other current assets	12,043	13,936
Total current assets	<u>130,053</u>	<u>128,645</u>
Long-term marketable securities	179,286	194,714
Property, plant and equipment, net	35,077	33,783
Other non-current assets	23,086	18,177
Total assets	<u>\$ 367,502</u>	<u>\$ 375,319</u>

Apple Balance Sheet: Assets

LIABILITIES AND SHAREHOLDERS' EQUITY:

Current liabilities:

Accounts payable	\$	34,311	\$	49,049
Accrued expenses		26,756		25,744
Deferred revenue		7,775		7,548
Commercial paper		11,980		11,977
Current portion of long-term debt		8,498		6,496
Total current liabilities		<u>89,320</u>		<u>100,814</u>

Deferred revenue, non-current		3,087		2,836
Long-term debt		101,362		97,207
Other non-current liabilities		46,855		40,415
Total liabilities		<u>240,624</u>		<u>241,272</u>

Commitments and contingencies

Shareholders' equity:

Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 4,943,282 and 5,126,201 shares issued and outstanding, respectively		38,044		35,867
Retained earnings		91,898		98,330
Accumulated other comprehensive income/(loss)		(3,064)		(150)
Total shareholders' equity		<u>126,878</u>		<u>134,047</u>
Total liabilities and shareholders' equity	\$	<u>367,502</u>	\$	<u>375,319</u>

Apple Balance Sheet: Liabilities and Shareholders' Equity

RATIO ANALYSIS BASICS

Ratio analysis is used to measure company's ability to:

- Generate a healthy return on capital
- Manage assets
- Meet short-term obligations (liquidity)
- Meet long-term obligations (solvency)

TESTS OF LIQUIDITY

- Current Ratio
- Quick Ratio

Tests of liquidity focus on the relationship between current assets and current liabilities as well as interest payments. Measures the company's ability to meet its short term obligations.

CURRENT RATIO

$$\text{CURRENT RATIO} = \frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITIES}}$$

		2016	2017
Current Ratio	Current Assets	\$ 106,869	\$ 128,645
	Current Liabilities	\$ 79,006	\$ 100,814
	Current Ratio	1.35	1.28

This ratio measures the ability of the company to pay current debts as they become due.

QUICK RATIO (ACID TEST)

$$\text{QUICK RATIO} = \frac{\text{QUICK ASSETS}}{\text{CURRENT LIABILITIES}}$$

QUICK ASSETS

- CASH
- S/T INVESTMENTS
- ACCOUNTS RECEIVABLE

		2016	2017
Quick Ratio	Quick Assets	\$ 97,182	\$ 110,072
	Current Liabilities	\$ 79,006	\$ 100,814
	Quick Ratio	1.23	1.09

*This ratio measures the company's **immediate** ability to pay debts, so it excludes inventory.*

TESTS OF SOLVENCY

- Debt to Equity

Tests of solvency measure a company's ability to meet its long-term obligations.

DEBT/EQUITY RATIO

$$\text{DEBT/EQUITY RATIO} = \frac{\text{DEBT}}{\text{SHAREHOLDER EQUITY}}$$

		2016	2017
Debt to Equity	Debt	\$ 87,032	\$ 115,680
	Equity	\$ 128,249	\$ 134,047
	Debt to Equity	0.68	0.86

This ratio measures the amount of debt that exists for each \$1 invested by the owners.

Typically this measures structured debt.

RETURN ON EQUITY

$$\text{RETURN ON EQUITY} = \frac{\text{NET INCOME}}{\text{STOCKHOLDER'S EQUITY}}$$

		2016	2017
Apple's ROE	Net Income	\$ 45,687	\$ 48,351
	Equity	\$ 128,249	\$ 134,047
	ROE	35.6%	36.1%

This measure indicates how much income was earned for every dollar of equity invested by the owners.

BASIC CALCULATIONS

- Net cash or debt: all cash (including marketable securities) minus all debt (short and long term)
- Debt to equity ratio (net debt / equity)
- Net cash or debt growth
- Inventory growth rate (compare to revenue growth)
- Current ratio: current assets / current liabilities
- Quick ratio: (current assets – inventory) / current liabilities
- Return on equity (net income / equity)

EXERCISE

- For both Apple and Costco, calculate:
 - Net cash or debt
 - Debt to equity ratio
 - Net debt growth rate
 - Inventory growth rate
 - Current ratio
 - Quick ratio
 - Return on equity

Apple Inc.

CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)
(In millions, except number of shares which are reflected in thousands and par value)

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Total current assets	130,053	128,645
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Property, plant and equipment, net	35,077	33,783
Other non-current assets	23,086	18,177
Total assets	<u>\$ 367,502</u>	<u>\$ 375,319</u>
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	\$ 34,311	\$ 49,049
Accrued expenses	26,756	25,744
Deferred revenue	7,775	7,548
Commercial paper	11,980	11,977
Current portion of long-term debt	8,498	6,496
Total current liabilities	89,320	100,814
Deferred revenue, non-current	3,087	2,836
Long-term debt	101,362	97,207
Other non-current liabilities	46,855	40,415
Total liabilities	240,624	241,272
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 4,943,282 and 5,126,201 shares issued and outstanding, respectively	38,044	35,867
Retained earnings	91,898	98,330
Accumulated other comprehensive income/(loss)	(3,064)	(150)
Total shareholders' equity	126,878	134,047
Total liabilities and shareholders' equity	<u>\$ 367,502</u>	<u>\$ 375,319</u>

Apple Balance Sheet

COSTCO WHOLESALE CORPORATION
CONSOLIDATED BALANCE SHEETS
(amounts in millions, except par value and share data)

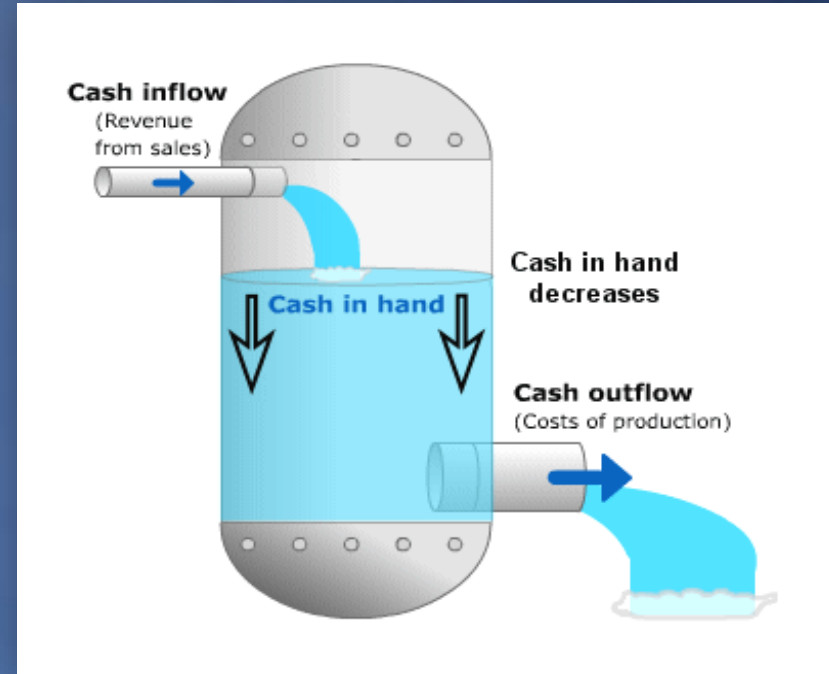
	September 3, 2017	August 28, 2018
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 4,546	\$ 3,379
Short-term investments	1,233	1,350
Receivables, net	1,432	1,252
Merchandise inventories	9,834	8,969
Other current assets	272	268
Total current assets	17,317	15,218
PROPERTY AND EQUIPMENT		
Land	5,690	5,395
Buildings and improvements	15,127	13,994
Equipment and fixtures	6,681	6,077
Construction in progress	843	701
	28,341	26,167
Less accumulated depreciation and amortization	(10,180)	(9,124)
Net property and equipment	18,161	17,043
OTHER ASSETS	869	902
TOTAL ASSETS	<u>\$ 36,347</u>	<u>\$ 33,163</u>
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 9,608	\$ 7,612
Current portion of long-term debt	86	1,100
Accrued salaries and benefits	2,703	2,629
Accrued member rewards	961	869
Deferred membership fees	1,498	1,362
Other current liabilities	2,639	2,003
Total current liabilities	17,495	15,575
LONG-TERM DEBT, excluding current portion	6,573	4,061
OTHER LIABILITIES	1,200	1,195
Total liabilities	25,268	20,831
COMMITMENTS AND CONTINGENCIES		
EQUITY		
Preferred stock \$.01 par value; 100,000,000 shares authorized; no shares issued and outstanding	0	0
Common stock \$.01 par value; 900,000,000 shares authorized; 437,204,000 and 437,524,000 shares issued and outstanding	4	2
Additional paid-in capital	5,800	5,490
Accumulated other comprehensive loss	(1,014)	(1,099)
Retained earnings	5,988	7,686
Total Costco stockholders' equity	10,778	12,079
Noncontrolling interests	301	253
Total equity	11,079	12,332
TOTAL LIABILITIES AND EQUITY	<u>\$ 36,347</u>	<u>\$ 33,163</u>

Costco Balance Sheet

FIVE COMPANY EXERCISE

THE CASH FLOW STATEMENT TRACKS ALL CASH GOING INTO AND OUT OF A COMPANY

- Captures elements of both the income statement and balance sheet
- Inflows and outflows of cash over a certain period of time
- Allocates all cash going in and out of a company into three categories: operating, investing, and financing activities



THE CASH FLOW STATEMENT DETAILS CASH FLOWS FROM ALL THREE AREAS OF A BUSINESS

- Operating
 - Cash generated by a company's operating activities
 - Cash the company pays out related to its operating activities (e.g., payments to suppliers and employees)
- Investing
 - Capital expenditures (cap ex)
 - Acquisitions
 - Purchase and sale of investment securities, property
- Financing
 - Proceeds from issuance of debt and equity
 - Cash spent on share repurchases and dividends

Balance
Sheet shows
where I was

Assets
(incl.
cash)

Liabilities
&
Equity

CASH FLOW EXPLAINS HOW CASH CHANGED

Cash Flow Statement

INCOME STATEMENT TELLS THE STORY
OF WHAT HAPPENED

Income Statement

Balance Sheet
shows where
I am now

Assets
(incl.
cash)

Liabilities
&
Equity

THE CASH FLOW STATEMENT: CASH GENERATED BY OPERATING ACTIVITIES

- Apple

	Six Months Ended	
	March 31, 2018	April 1, 2017
Cash and cash equivalents, beginning of the period	\$ 20,289	\$ 20,484
Operating activities:		
Net income	33,887	28,920
Adjustments to reconcile net income to cash generated by operating activities:		
Depreciation and amortization	5,484	5,319
Share-based compensation expense	2,644	2,473
Deferred income tax expense/(benefit)	(34,235)	2,822
Other	(151)	(209)
Changes in operating assets and liabilities:		
Accounts receivable, net	3,523	4,183
Inventories	(2,807)	(778)
Vendor non-trade receivables	9,715	4,512
Other current and non-current assets	(1,053)	(896)
Accounts payable	(13,220)	(6,862)
Deferred revenue	478	(221)
Other current and non-current liabilities	39,158	541
Cash generated by operating activities	43,423	39,804

THE CASH FLOW STATEMENT: CASH GENERATED BY INVESTING ACTIVITIES

- Apple

	Six Months Ended	
	March 31, 2018	April 1, 2017
	\$ 20,289	\$ 20,484
Investing activities:		
Purchases of marketable securities	(48,449)	(99,821)
Proceeds from maturities of marketable securities	31,884	12,429
Proceeds from sales of marketable securities	38,942	60,454
Payments for acquisition of property, plant and equipment	(7,005)	(6,309)
Payments made in connection with business acquisitions, net	(305)	(67)
Other	53	(10)
Cash generated by/(used in) investing activities	15,120	(33,324)

THE CASH FLOW STATEMENT: CASH GENERATED BY FINANCING ACTIVITIES

- Apple

	Six Months Ended	
	March 31, 2018	April 1, 2017
	\$ 20,289	\$ 20,484
Financing activities:		
Proceeds from issuance of common stock	327	273
Payments for taxes related to net share settlement of equity awards	(1,190)	(788)
Payments for dividends and dividend equivalents	(6,529)	(6,134)
Repurchases of common stock	(32,851)	(18,012)
Proceeds from issuance of term debt, net	6,969	10,975
Repayments of term debt	(500)	—
Change in commercial paper, net	1	1,879
Cash used in financing activities	(33,773)	(11,807)
Increase/(Decrease) in cash and cash equivalents	24,770	(5,327)
Cash and cash equivalents, end of the period	\$ 45,059	\$ 15,157

ANALYZING FINANCIAL STATEMENTS



KASE LEARNING

“VALUE” OF THE COMPANY

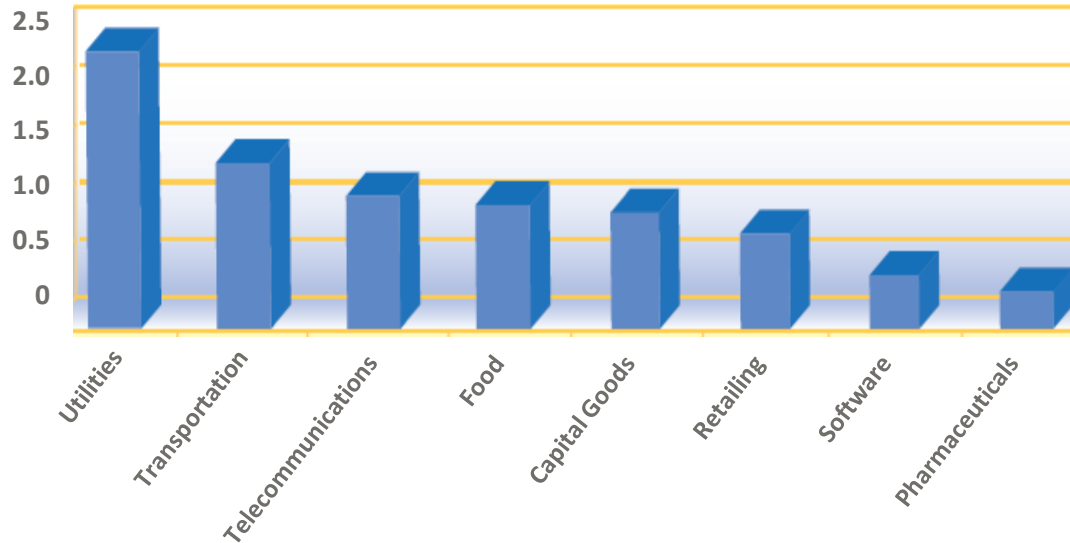
- Stockholders' equity = book value
 - Book value is stated on the balance sheet and is determined by Generally Accepted Accounting Principles (GAAP)
- Book value \neq market value
 - Market value (market capitalization) = # of shares x price per share
- Book value \neq true valuation of the company
 - A company's true value is based on many variables, including: expected future cash flows of the firm, market position, size, growth potential, risk, competition, and employee and management quality

RETURN ON EQUITY: THE DUPONT FORMULA

*There are three ways to improve ROE:
higher profit margin, faster asset turnover, or higher leverage*

ROE	=	$\frac{\text{NET INCOME}}{\text{REVENUES}}$	X	$\frac{\text{REVENUES}}{\text{ASSETS}}$	X	$\frac{\text{ASSETS}}{\text{EQUITY}}$
APPLE'S ROE	=	$\frac{48,351}{229,234}$	X	$\frac{229,234}{375,319}$	X	$\frac{375,319}{134,047}$
APPLE'S ROE	=	0.21	X	0.61	X	2.80
	=	35.9%				

MEDIAN RATIO OF LIABILITIES TO EQUITY FOR SELECTED INDUSTRIES



MEASURING CASH FLOWS

- EBIT
- EBITDA
- Free cash flow

Cash flows are the life blood of any organization – and there are many ways to calculate them.

EBIT: EARNINGS BEFORE INTEREST AND TAXES

For many companies, this is simply operating income.

		2016	2017
EBIT	Net Income	\$ 45,687	\$ 48,351
	Taxes	\$ 15,685	\$ 15,738
	Interest (net)	\$ 2,543	\$ 2,878
	EBIT	\$ 63,915	\$ 66,967

EBITDA: EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION & AMORTIZATION

A very common measure of cash flow – yet very flawed, primarily because it adds back depreciation but ignores cap ex.

		2016	2017
EBITDA	Net Income	\$ 45,687	\$ 48,351
	Taxes	\$ 15,685	\$ 15,738
	Interest (net)	\$ 2543	\$ 2878
	D&A	\$ 10,505	\$ 10,157
	EBITDA	\$ 74,420	\$ 77,124

DEPRECIATION AND AMORTIZATION

- Depreciation
 - Depreciation is an accounting method of allocating the cost of a *tangible* asset over its useful life and is used to account for declines in value over time. Businesses depreciate long-term assets for both tax and accounting purposes.
- Amortization
 - Amortization is an accounting technique used to incrementally lower the cost value of an *intangible* asset through scheduled charges to income.
 - Amortization is also the paying off of debt with a fixed repayment schedule in regular installments over a period of time for example with a mortgage or a car loan.
- They are both non-cash charges – but usually represent very real cash expenses

FREE CASH FLOW

*There are many ways to measure this, but a common way is cash flow from operations minus maintenance cap ex
(depreciation is often a good measure of maintenance cap ex)*

		2016	2017
Free Cash Flow	CFFO	\$ 65,824	\$ 63,598
	Maint cap ex	\$ 10,505	\$ 10,157
	FCF	\$ 55,319	\$ 53,441

VALUATION RATIOS

- Market capitalization
- Enterprise value
- P/E ratio
- Enterprise value/EBITDA
- P/S ratio
- P/B ratio

Investors use
many tools
to value
companies.

MARKET CAPITALIZATION

The value the market places on the company's shares.

MARKET CAP	=	DILUTED SHARES OUTSTANDING	X	SHARE PRICE		
APPLE MARKET CAP	=	4.9151 billion	X	\$188.58	=	\$926.9 billion

ENTERPRISE VALUE

Market cap adjusted for cash and debt

ENTERPRISE VALUE	=	MARKET CAP	+	DEBT	-	CASH	
APPLE ENTERPRISE VALUE	=	\$926.9	+	\$121.8	-	\$267.2	= \$781.5 billion

P/E (PRICE TO EARNINGS) RATIO

*Compares a company's share price to its earnings per share.
The most commonly used valuation measure.*

$$\begin{array}{ccccccc} \text{P/E RATIO} & = & \text{SHARE PRICE} & / & \text{EARNINGS PER SHARE*} & & \\ \\ \text{APPLE P/E RATIO} & = & \$188.58 & / & \$10.41 & = & 18.12x \end{array}$$

** Some people use trailing 12-month EPS, others use current year estimates, others use next 12 month estimates, while still others use the next calendar year. There is no right answer. For the purposes of this example, let's use actual trailing 12-month earnings of \$10.41.*

EV/EBITDA RATIO

Sort of like the P/E ratio, but it compares a company's enterprise value (which includes debt) with its EBITDA (which is a measure of cash flow before interest payments on debt). A commonly used valuation measure in the buyout business.

$$\text{EV/EBITDA RATIO} = \frac{\text{ENTERPRISE VALUE}}{\text{EBITDA}}$$

$$\text{APPLE EV/EBITDA RATIO} = \frac{\$781.5}{\$76.4} = 10.2x$$

P/S (PRICE TO SALES) RATIO

*Compares a company's share price to its revenues per share.
Can be useful in comparing companies in the same industry.*

$$\text{P/S RATIO} = \frac{\text{SHARE PRICE}}{\text{REVENUES PER SHARE}} = \frac{\text{MARKET CAP}}{\text{REVENUES}}$$

$$\text{APPLE P/S RATIO} = \frac{\$926.9 \text{ billion}}{\$247.4 \text{ billion}} = 3.8x$$

P/B (PRICE TO BOOK) RATIO

Compares a company's share price to its equity. Is most often used to value financial companies, which tend to more liquid, easier to value assets.

$$\text{P/B RATIO} = \frac{\text{SHARE PRICE}}{\text{EQUITY PER SHARE}} = \frac{\text{MARKET CAP}}{\text{EQUITY}}$$

$$\text{APPLE P/B RATIO} = \frac{\$926.9 \text{ billion}}{\$134.1 \text{ billion}} = 6.9x$$



KASE LEARNING