Supply Chain Financial Analysis

MIT Center for
Transportation & Logistics

Components of the Financial Statements:
The Income Statement & Balance Sheet

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Many Important Financial Statements

- Statement of Changes in Financial Position
- Income Statement
- Balance Sheet
- 10K
- Annual Report
- Etc.

- In this segment we will focus on the Income Statement and the Balance Sheet

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Income Statement

- Income Statement: The sum of income-generating transactions over a stated period of time (sometimes called Statement of Operations)
    - Revenues (sales, turnover, proceeds)
    - Expenses (cost of goods sold, operating expense, depreciation)
    - Profit (income, gross profit, net profit, EBIT)

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Operating Expense Element: COGS

- Cost of Goods Sold (or Cost of Sales):
  - Includes the direct costs attributable to the production of the products sold by the company; includes the cost of the materials and the direct labor costs used to produce the product

  - Does not include indirect expenses, expenses that are not attributable to specific products, such as distribution costs and sales force costs

Ref: Investopedia COGS and Cost of Revenue

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Operating Expense Element: COGS

- Cost of Revenue: slightly different than COGS
  - Includes the direct costs attributable to the production of the product; includes the cost of the materials and the direct labor costs used to produce the product
  - AND it includes costs beyond production, such as distribution and marketing

Ref: Investopedia COGS and Cost of Revenue

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Operating Expense Elements: SG&A

- Sales, General and Administration (SG&A)
  - Sales expenses are direct and indirect expenses directly linked to the sale of product
    - Includes cost of sales personnel, advertising, promotion, phone, sales expenses
  - General and Administration expenses are those expenses not directly associated with production or sales of the product
    - Includes wages for non-sales personnel, cost for utilities, rent, insurance

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Operating Expense Element: Other

- Other: found in various locations
  - Depreciation – accounting for the reduction in value of a tangible asset, e.g. equipment
  - Amortization – accounting for the reduction in value of an intangible asset, e.g. goodwill
    - Goodwill – recorded as an asset on the balance sheet, it is premium paid above book value for an asset usually attributed to band value, IP or reputation
  - Research & Development (R&D)

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Income Statement: Intel 2014

INTEL CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

Three Years Ended December 27, 2014 (In Millions, Except Per Share Amounts)	2014	2013	2012
Net revenue	$ 55,870	$ 52,708	$ 53,341
Cost of sales	20,261	21,187	20,190
Gross margin	35,609	31,521	33,151
Research and development	11,537	10,611	10,148
Marketing, general and administrative	8,136	8,088	8,057
Restructuring and asset impairment charges	295	240	—
Amortization of acquisition-related intangibles	294	291	308
Operating expenses	20,262	19,230	18,513
Operating income	15,347	12,291	14,638
Gains (losses) on equity investments, net	411	471	141
Interest and other, net	43	(151)	94
Income before taxes	15,801	12,611	14,873
Provision for taxes	4,097	2,991	3,868
Net income	$ 11,704	$ 9,620	$ 11,005

Ref.: Intel 2014 Annual Report, p 50   9

Income Statement: General Motors 2014

General Motors Company (GM) - NYSE ★ Watchlist   ➕ Add to Portfolio   👍 Like ‹501

28.82 ↓0.29(1.00%) 11:40AM EDT - Nasdaq Real Time Price

Income Statement   Get Income Statement for: GO

View: **Annual Data** | Quarterly Data   All numbers in thousands

Period Ending	Dec 31, 2014	Dec 31, 2013	Dec 31, 2012
Total Revenue	155,929,000	155,427,000	152,256,000
Cost of Revenue	142,121,000	137,373,000	141,443,000
Gross Profit	13,808,000	18,054,000	10,813,000
Operating Expenses			
Research Development	-	-	-
Selling General and Administrative	12,158,000	12,382,000	14,031,000
Non Recurring	120,000	541,000	27,145,000
Others	-	-	-
Total Operating Expenses	-	-	-
Operating Income or Loss	1,530,000	5,131,000	(30,363,000)
Income from Continuing Operations			
Total Other Income/Expenses Net	1,025,000	851,000	595,000
Earnings Before Interest And Taxes	4,649,000	7,792,000	(28,206,000)
Interest Expense	403,000	334,000	489,000
Income Before Tax	4,246,000	7,458,000	(28,695,000)
Income Tax Expense	228,000	2,127,000	(34,831,000)
Minority Interest	(69,000)	15,000	52,000
Net Income From Continuing Ops	6,245,000	6,944,000	7,500,000

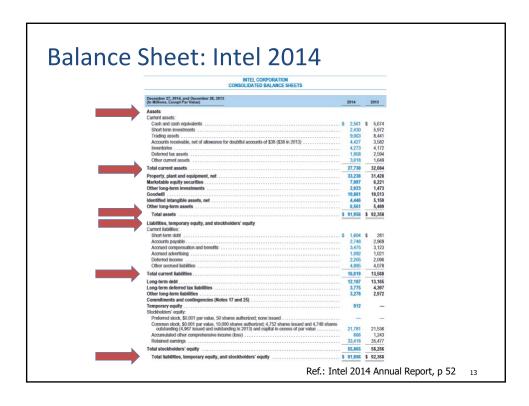Ref.: https://finance.yahoo.com/q/is?s=GM+Income+Statement&annual

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Balance Sheet

- Reports the financial condition of assets and liabilities of the business <u>at ONE point in time</u>
  - Assets (something owned of measured value...but not always material)
  - Liabilities (a claim against the assets)

Balance Sheet Info

- Assets ALWAYS equal Liabilities

- When recording asset value, book value is recorded, not market value
  - There are different methods of valuing inventory (LIFO, FIFO)

Balance Sheet: Intel 2014

INTEL CORPORATION
CONSOLIDATED BALANCE SHEETS

December 27, 2014, and December 28, 2013 (In Millions, Except Par Value)	2014	2013
Assets		
Current assets:		
Cash and cash equivalents	$ 2,561	$ 5,674
Short-term investments	2,430	5,972
Trading assets	9,063	8,441
Accounts receivable, net of allowance for doubtful accounts of $38 ($38 in 2013)	4,427	3,582
Inventories	4,273	4,172
Deferred tax assets	1,958	2,594
Other current assets	3,018	1,649
Total current assets	**27,730**	**32,084**
Property, plant and equipment, net	33,238	31,428
Marketable equity securities	7,097	6,221
Other long-term investments	2,023	1,473
Goodwill	10,861	10,513
Identified intangible assets, net	4,446	5,150
Other long-term assets	6,561	5,489
Total assets	**$ 91,956**	**$ 92,358**
Liabilities, temporary equity, and stockholders' equity		
Current liabilities:		
Short-term debt	$ 1,604	$ 281
Accounts payable	2,748	2,969
Accrued compensation and benefits	3,475	3,123
Accrued advertising	1,092	1,021
Deferred income	2,205	2,096
Other accrued liabilities	4,895	4,078
Total current liabilities	**16,019**	**13,568**
Long-term debt	12,107	13,165
Long-term deferred tax liabilities	3,775	4,397
Other long-term liabilities	3,278	2,972
Commitments and contingencies (Notes 17 and 25)		
Temporary equity	912	—
Stockholders' equity:		
Preferred stock, $0.001 par value, 50 shares authorized; none issued	—	—
Common stock, $0.001 par value, 10,000 shares authorized; 4,752 shares issued and 4,748 shares outstanding (4,967 issued and outstanding in 2013) and capital in excess of par value	21,781	21,536
Accumulated other comprehensive income (loss)	666	1,243
Retained earnings	33,418	35,477
Total stockholders' equity	**55,865**	**58,256**
Total liabilities, temporary equity, and stockholders' equity	**$ 91,956**	**$ 92,358**

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Assets

- Current Assets - short-term in nature, liquid assets, can be converted into cash in the next accounting period
    - Accounts Receivable
    - Inventory
    - Marketable securities
    - Prepaid expenses

- Long-term Assets
    - Plant, property, equipment
    - Other fixed assets
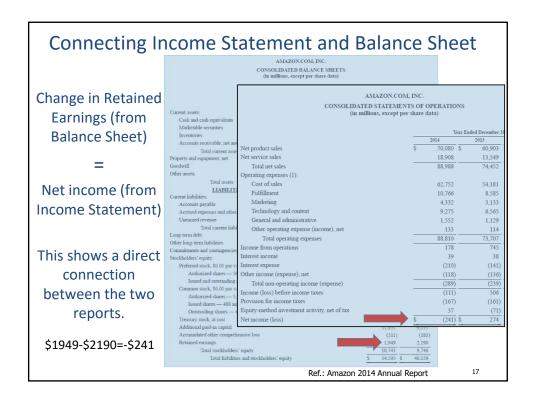   - 'Goodwill'

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Liabilities

- Current Liabilities: obligations to be paid in the next accounting period
  - Accounts Payable
  - Accrued Expenses – an expense before it is paid (wages, interest in loans, taxes)
  - Notes Payable, Short-term Bank Debt (line of credit)
- Long-term Liabilities
  - Debt (bonds, mortgage)
- Equity (Owner's Equity): capital, funding for the firm from sources other than liabilities
  - Paid-in-capital (from initial investments)
  - Retained Earnings (company income)

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Supply Chain transactions affect both Income Statement and Balance Sheet

- A company sells a product for $10,000 cash; the product cost $2,000 to produce and deliver
- How would this impact the income statement and balance sheet upon delivery?
- Revenue would increase by $10,000
- Cost would increase by $2,000
- Net income would increase by $8,000
- Cash (Current Asset) would increase by $10,000
- Inventory (Current Asset) would decrease by $2,000
- Retained Earnings would increase by $8,000

Note: This is a gross simplification of the accounting transactions which are not complete; this is for general illustration purposes only.

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Connecting Income Statement and Balance Sheet

Change in Retained Earnings (from Balance Sheet)

=

Net income (from Income Statement)

This shows a direct connection between the two reports.

$1949-$2190=-$241

AMAZON.COM, INC.
CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

Current assets:
Cash and cash equivalents
Marketable securities
Inventories
Accounts receivable, net and...
Total current asse...
Property and equipment, net
Goodwill
Other assets
Total assets
LIABILIT...
Current liabilities:
Accounts payable
Accrued expenses and other
Unearned revenue
Total current liab...
Long-term debt
Other long-term liabilities
Commitments and contingencies
Stockholders' equity:
Preferred stock, $0.01 par v...
Authorized shares — 5...
Issued and outstanding...
Common stock, $0.01 par v...
Authorized shares — 5...
Issued shares — 488 an...
Outstanding shares —...
Treasury stock, at cost
Additional paid-in capital
Accumulated other comprehensive loss
Retained earnings
Total stockholders' equity
Total liabilities and stockholders' equity

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share data)

	Year Ended December 31	
	2014	2013
Net product sales	$ 70,080	$ 60,903
Net service sales	18,908	13,549
Total net sales	88,988	74,452
Operating expenses (1):		
Cost of sales	62,752	54,181
Fulfillment	10,766	8,585
Marketing	4,332	3,133
Technology and content	9,275	6,565
General and administrative	1,552	1,129
Other operating expense (income), net	133	114
Total operating expenses	88,810	73,707
Income from operations	178	745
Interest income	39	38
Interest expense	(210)	(141)
Other income (expense), net	(118)	(136)
Total non-operating income (expense)	(289)	(239)
Income (loss) before income taxes	(111)	506
Provision for income taxes	(167)	(161)
Equity-method investment activity, net of tax	37	(71)
Net income (loss)	$ (241)	$ 274

Accumulated other comprehensive loss (511) (185)
Retained earnings 1,949 2,190
Total stockholders' equity 10,741 9,746
Total liabilities and stockholders' equity $ 54,505 $ 40,159

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Key Points

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Key Points

- The Income Statement provides a summary of the flows in (revenue) and out (expenses) of the firm over a period of time; the net difference between the revenue and expense being the profit or loss of the firm.
- The Balance Sheet gives a snapshot of the assets and obligations of the firm at a single moment in time.
- Together, the Income Statement and Balance Sheet provide a basic – but not complete – understanding of the performance of the firm.

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Questions, Comments, Suggestions?
Use the Discussion…..

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Sources, Image & Reference Information

- **References**
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- Intel 2014 Annual Report
- General Motors 2014 Annual Report as found at
  https://finance.yahoo.com/q/is?s=GM+Income+Statement&annual
- Investopedia COGS and Cost of Revenue reference found at
  http://www.investopedia.com/terms/c/cogs.asp

- **For more information on these topics, see:**
- Hawkins, David, Corporate Financial Reporting and Analysis: Text and Cases 3rd ed., Irwin, 1986
- Higgins, R. Analysis for Financial Management. 10th ed. McGraw-Hill Irwin, 2011 (or 11th ed., 2015), see Chapter 1
- Anthony, R.N. and Breitner, L.K. Essentials of Accounting. 10th ed. Prentice Hill, 2009, see pages 1-66 [this is a workbook that you should work through, it is not enough just to read it!]
- Anthony, R.N. and Breitner, L.K. Core Concepts of Accounting. 10th ed. Prentice Hill, 2010, see pages 1-43 [this book provides a summary of the Essentials book, but the reader should go through the Essentials book first for complete coverage of the material]

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