Supply Chain Financial Analysis

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

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
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

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)
### Income Statement: Intel 2014

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net revenue</strong></td>
<td>$56,879</td>
<td>$52,708</td>
<td>$53,341</td>
</tr>
<tr>
<td><strong>Cost of sales</strong></td>
<td>20,261</td>
<td>21,187</td>
<td>20,190</td>
</tr>
<tr>
<td><strong>Gross margin</strong></td>
<td>36,618</td>
<td>31,521</td>
<td>33,151</td>
</tr>
<tr>
<td><strong>Research and development</strong></td>
<td>11,537</td>
<td>10,611</td>
<td>15,149</td>
</tr>
<tr>
<td><strong>Marketing, general and administrative</strong></td>
<td>8,156</td>
<td>8,088</td>
<td>8,057</td>
</tr>
<tr>
<td><strong>Restructuring and asset impairment charges</strong></td>
<td>295</td>
<td>240</td>
<td>--</td>
</tr>
<tr>
<td><strong>Amortization of acquisition-related intangibles</strong></td>
<td>598</td>
<td>291</td>
<td>308</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td>20,362</td>
<td>19,230</td>
<td>18,013</td>
</tr>
<tr>
<td><strong>Costs (losses) on equity investments, net</strong></td>
<td>411</td>
<td>471</td>
<td>141</td>
</tr>
<tr>
<td><strong>Interest and other, net</strong></td>
<td>43</td>
<td>157</td>
<td>94</td>
</tr>
<tr>
<td><strong>Income before taxes</strong></td>
<td>15,991</td>
<td>12,611</td>
<td>14,873</td>
</tr>
<tr>
<td><strong>Provision for taxes</strong></td>
<td>4,097</td>
<td>2,991</td>
<td>3,600</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>$11,894</td>
<td>$9,620</td>
<td>$11,062</td>
</tr>
</tbody>
</table>

Ref.: Intel 2014 Annual Report, p 50

### Income Statement: General Motors 2014

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Revenue</strong></td>
<td>158,920,000</td>
<td>166,427,000</td>
<td>162,280,000</td>
</tr>
<tr>
<td><strong>Cost of Revenue</strong></td>
<td>147,829,000</td>
<td>157,322,000</td>
<td>161,449,000</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>11,091,000</td>
<td>10,091,000</td>
<td>10,831,000</td>
</tr>
<tr>
<td><strong>Research and Development</strong></td>
<td>12,100,000</td>
<td>13,302,000</td>
<td>16,035,000</td>
</tr>
<tr>
<td><strong>Non-Recurring</strong></td>
<td>520,000</td>
<td>541,000</td>
<td>27,415,000</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Operating Income or Loss</strong></td>
<td>1,330,000</td>
<td>5,131,000</td>
<td>$(9,013,000)</td>
</tr>
<tr>
<td><strong>Income from Continuing Operations</strong></td>
<td>7,022,000</td>
<td>8,010,000</td>
<td>15,000,000</td>
</tr>
<tr>
<td><strong>Earnings Before Interest And Taxes</strong></td>
<td>4,848,000</td>
<td>7,792,000</td>
<td>$(29,200,000)</td>
</tr>
<tr>
<td><strong>Interest Expense</strong></td>
<td>403,000</td>
<td>534,000</td>
<td>481,000</td>
</tr>
<tr>
<td><strong>Income Before Tax</strong></td>
<td>4,445,000</td>
<td>7,258,000</td>
<td>$(30,681,000)</td>
</tr>
<tr>
<td><strong>Income Tax Expense</strong></td>
<td>220,000</td>
<td>2,127,000</td>
<td>$(10,817,000)</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>4,225,000</td>
<td>5,131,000</td>
<td>$(20,468,000)</td>
</tr>
</tbody>
</table>

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

- Reports the financial condition of assets and liabilities of the business at ONE point in time
  - 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**

**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"
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)

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.
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

Key Points

Ref.: Amazon 2014 Annual Report
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.

Questions, Comments, Suggestions? Use the Discussion....
Sources, Image & Reference Information

• References
• Amazon 2014 Annual Report
• 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:
  • 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]