<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Boeing: financial analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Chan, Tsz Ki Jefferson (陳祉祁); Chen, Mutong Alex (陳沐彤); Hegde, Ishwara Manjunath; Pua, Jeremiah (潘金順); Strydom, Marthinus; Tandon, Rishabh</td>
</tr>
<tr>
<td><strong>Citation</strong></td>
<td>Chan, T. K. J., Chen, M. A., Hegde, I. M., Pua, J., Strydom, M., &amp; Tandon, R. (2016). Boeing: financial analysis (Outstanding Academic Papers by Students (OAPS)). Retrieved from City University of Hong Kong, CityU Institutional Repository.</td>
</tr>
<tr>
<td><strong>Issue Date</strong></td>
<td>2016</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/2031/8799">http://hdl.handle.net/2031/8799</a></td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>This work is protected by copyright. Reproduction or distribution of the work in any format is prohibited without written permission of the copyright owner. Access is unrestricted.</td>
</tr>
</tbody>
</table>
Boeing: Financial Analysis

CHAN Tsz Ki Jefferson
CHEN Mutong Alex
HEGDE Ishwara Manjunath
PUA Jeremiah
STRYDOM Marthinus
TANDON Rishabh

City University of Hong Kong
2016
Table of Contents

Introduction & Background ............................................. Page 3

Financial Ratios - Boeing ............................................. Page 4

Trend Analysis – Boeing ................................................. Page 13

Peer Analysis – Industry Average ................................. Page 25

Peer Analysis – UTX ...................................................... Page 27

ROE & Du Pont Identity Analysis ................................. Page 29

Conclusion & Investment Recommendation ................ Page 31
1. Introduction and Background

Industry:

Having been in the Global Aerospace and Defense Industry for a century now, the Boeing Company is an industry giant. The global A&D industry is expected to return to growth in 2016 fueled by the travel demand, new technology, and national security threats.

The defense budget of the U.S., China, U.K., France, Japan, and several Middle Eastern countries are expected to increase due to the heightened threats, both foreign and domestic, therefore global revenues within the defense sector have a high probability of growing in 2016 as the governments seek to equip their armed forces with more modern weapons and support systems. (Deloitte, 2016)

As for the commercial aerospace sector, it is estimated to be able to sustain its current decade-long trend of above-average growth rates. The main drivers of its growth are the continuous increase of the passenger travel demand as the middle class burgeons in many parts of the developing world, record low crude oil prices, and an accelerated equipment replacement cycle. (Deloitte, 2016)

Moreover, the significant increase of the global revenue has led to an unprecedented level of the aircraft sales. Some key findings from the 2015 report of the Global A&D Industry outlook provided by Deloitte Touché Tohmatsu Limited indicated that the earnings growth in the commercial aerospace sector has a high potential to become a bright spot and driving force of the global A&D industry's performance. (Deloitte, 2016)

Company:

The Boeing Company (BA: US) is an American multinational cooperation, which is headquartered in Chicago, IL. The company is well known to the world for designing, producing and supplying aircrafts, rockets and satellites worldwide. Apart from being one of the market leaders within the sector, Boeing is also one of the largest defense contractors in the world and is the largest exporter in the country.

William Boeing founded Boeing in 1916. With a century of growth and development, the business is, now, organized effectively by mainly four divisions, namely, Boeing Commercial Airplanes, Boeing Defense, Space & Security, Engineering, Operations & Technology and Boeing Shared Service Group.

2. Financial Ratios – Boeing

The following financial statements have been taken from the 2015 Annual report of Boeing Company. The figures from the annual report will be used for the calculations in question 2.

<table>
<thead>
<tr>
<th>The Boeing Company and Subsidiaries</th>
<th>Consolidated Statements of Financial Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Dollars in millions, except per share data)</td>
<td></td>
</tr>
<tr>
<td>December 31,</td>
<td>2015</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$11,302</td>
</tr>
<tr>
<td>Short-term and other investments</td>
<td>780</td>
</tr>
<tr>
<td>Accounts receivable, net</td>
<td>8,713</td>
</tr>
<tr>
<td>Current portion of customer financing, net</td>
<td>212</td>
</tr>
<tr>
<td>Inventories, net of advances and progress billings</td>
<td>47,257</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>68,234</td>
</tr>
<tr>
<td>Customer financing, net</td>
<td>3,368</td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>12,076</td>
</tr>
<tr>
<td>Goodwill</td>
<td>5,126</td>
</tr>
<tr>
<td>Acquired intangible assets, net</td>
<td>2,857</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>265</td>
</tr>
<tr>
<td>Investments</td>
<td>1,284</td>
</tr>
<tr>
<td>Other assets, net of accumulated amortization of $451 and $479</td>
<td>1,408</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$94,408</td>
</tr>
<tr>
<td><strong>Liabilities and equity</strong></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$10,800</td>
</tr>
<tr>
<td>Accrued liabilities</td>
<td>14,014</td>
</tr>
<tr>
<td>Advances and billings in excess of related costs</td>
<td>24,364</td>
</tr>
<tr>
<td>Short-term debt and current portion of long-term debt</td>
<td>1,234</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>50,412</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>2,392</td>
</tr>
<tr>
<td>Accrued retiree health care</td>
<td>6,616</td>
</tr>
<tr>
<td>Accrued pension plan liability, net</td>
<td>17,783</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>2,078</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>8,730</td>
</tr>
<tr>
<td><strong>Shareholders’ equity:</strong></td>
<td></td>
</tr>
<tr>
<td>Common stock, par value $5.00 – 1,200,000,000 shares authorized; 1,012,261,150 shares issued</td>
<td>5,061</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td>4,834</td>
</tr>
<tr>
<td>Treasury stock, at cost</td>
<td>(29,568)</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>38,756</td>
</tr>
<tr>
<td>Accumulated other comprehensive loss</td>
<td>(12,748)</td>
</tr>
<tr>
<td><strong>Total shareholders’ equity</strong></td>
<td>6,335</td>
</tr>
<tr>
<td>Noncontrolling interests</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td>6,397</td>
</tr>
<tr>
<td><strong>Total liabilities and equity</strong></td>
<td>$94,408</td>
</tr>
</tbody>
</table>

See Notes to the Consolidated Financial Statements on pages 54 – 109.
## The Boeing Company and Subsidiaries
### Consolidated Statements of Operations

*(Dollars in millions, except per share data)*

<table>
<thead>
<tr>
<th>Year ended December 31</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales of products</strong></td>
<td>$85,255</td>
<td>$80,688</td>
<td>$76,792</td>
</tr>
<tr>
<td><strong>Sales of services</strong></td>
<td>10,859</td>
<td>10,074</td>
<td>9,831</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td>96,114</td>
<td>90,762</td>
<td>86,623</td>
</tr>
<tr>
<td><strong>Cost of products</strong></td>
<td>(73,446)</td>
<td>(68,551)</td>
<td>(65,640)</td>
</tr>
<tr>
<td><strong>Cost of services</strong></td>
<td>(8,578)</td>
<td>(8,132)</td>
<td>(7,553)</td>
</tr>
<tr>
<td><strong>Boeing Capital interest expense</strong></td>
<td>(64)</td>
<td>(69)</td>
<td>(75)</td>
</tr>
<tr>
<td><strong>Total costs and expenses</strong></td>
<td>(82,088)</td>
<td>(76,752)</td>
<td>(73,268)</td>
</tr>
<tr>
<td><strong>Income from operating investments, net</strong></td>
<td>14,026</td>
<td>14,010</td>
<td>13,355</td>
</tr>
<tr>
<td><strong>General and administrative expense</strong></td>
<td>274</td>
<td>287</td>
<td>214</td>
</tr>
<tr>
<td><strong>Research and development expense, net</strong></td>
<td>(3,525)</td>
<td>(3,767)</td>
<td>(3,966)</td>
</tr>
<tr>
<td><strong>(Loss)/gain on dispositions, net</strong></td>
<td>(3,331)</td>
<td>(3,047)</td>
<td>(3,071)</td>
</tr>
<tr>
<td><strong>Earnings from operations</strong></td>
<td>7,443</td>
<td>7,473</td>
<td>6,562</td>
</tr>
<tr>
<td><strong>Other (loss)/income, net</strong></td>
<td>(13)</td>
<td>(3)</td>
<td>66</td>
</tr>
<tr>
<td><strong>Interest and debt expense</strong></td>
<td>(275)</td>
<td>(333)</td>
<td>(386)</td>
</tr>
<tr>
<td><strong>Earnings before income taxes</strong></td>
<td>7,155</td>
<td>7,137</td>
<td>6,232</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>(1,979)</td>
<td>(1,691)</td>
<td>(1,646)</td>
</tr>
<tr>
<td><strong>Net earnings from continuing operations</strong></td>
<td>5,176</td>
<td>5,446</td>
<td>4,586</td>
</tr>
<tr>
<td><strong>Net loss on disposal of discontinued operations, net of taxes of $0, $0, $0</strong></td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net earnings</strong></td>
<td>$5,176</td>
<td>$5,446</td>
<td>$4,586</td>
</tr>
</tbody>
</table>

| **Basic earnings per share** | $7.52 | $7.47 | $6.03 |
| **Diluted earnings per share** | $7.44 | $7.38 | $5.96 |

See Notes to the Consolidated Financial Statements on pages 54 – 109.
Financial Ratios

- All amounts in Millions of USD, except share data
- All data taken from Official Boeing Annual Report of 2015 unless otherwise stated.

Short Term Solvency Ratios

Short-term solvency ratios illustrate a company’s ability to liquidate assets in a short amount of time without a significant reduction in the value of these assets. That is, the readability of having cash at a moment’s notice through converting assets, without substantial loss in value. The importance of analyzing a firm’s liquidity is to determine the ability of a firm to overcome sudden challenges and fulfill short-term liabilities.

Current Ratio
The current ratio is calculated by dividing Current Assets of the company by Current Liabilities.

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

\[
= \frac{68,234}{50,412} = 1.35 \text{ times}
\]

The current ratio is just above 1, which represents a strong ability to cover short-term liabilities. Boeing have also done well, by not having their Current ratio too high, as this shows a sign of too much cash or current assets. Too much value in current assets is bad, because it is a sign of idle resources as the return on current assets is less than on longer term investments.

Quick Ratio
The quick ratio is calculating by subtracting the Inventory value from the Current Assets, prior to dividing by Current Liabilities.

\[
\text{Quick Ratio} = \frac{(\text{Current Assets} - \text{Inventory})}{\text{Current Liabilities}}
\]

\[
= \frac{(68,234 - 47,257)}{50,412} = 0.42 \text{ times}
\]

The quick ratio reveals that Boeing holds a large percentage of their current assets as inventory. As long as the market is purchasing, this would not be a problem. However, if the economy were to decline, Boeing could find themselves at risk of not being able to cover their near term liabilities.

Cash Ratio
The cash ratio is calculated by dividing the Cash and cash equivalents of the firm, by its Current Liabilities.

\[
\text{Cash Ratio} = \frac{\text{Cash}}{\text{Current Liabilities}}
\]

\[
= \frac{11,302}{50,412} = 0.22 \text{ times}
\]
Net Working Capital Ratio
The net working capital ratio is calculated by dividing the Working Capital by the Total Assets.

\[ \text{Net Working Capital Ratio} = \frac{\text{Working Capital}}{\text{Total Assets}} \]
\[ = \frac{17,822}{94,408} \approx 0.189 \text{ times} \]

Long Term Solvency Ratios / Financial Leverage Ratios
Long-term solvency, or financial leverage, ratios demonstrate the ability of a firm to fulfill its long-term obligations to creditors and shareholders.

Leverage Ratios:

Total Debt Ratio
The Total Debt ratio is calculated by subtracting the Total Equity from the Total Assets, and then dividing it by the Total Assets.

\[ \text{Total Debt Ratio} = \frac{(\text{Total Assets} - \text{Total Equity})}{\text{Total Assets}} \]
\[ = \frac{(94,408 - 6,397)}{94,408} \approx 0.93 \text{ times} \]

This tells us what percentage of their financing is from debt. In this case, Boeing’s financing comes 93% from debt. Some might argue that this is too high, but may be industry dependent, which we will see later.

Debt Equity Ratio
The Debt-Equity ratio is calculated by dividing the Total Debt by the Total Equity.

\[ \text{Debt Equity Ratio} = \frac{\text{Total debt}}{\text{Total Equity}} \]
\[ = \frac{88,011}{6,397} \approx 13.76 \text{ times} \]

This shows us that Boeing uses $13.76 in debt for every dollar of equity financing.

Equity Multiplier
The equity multiplier is calculated as Total Assets/Total Equity, or simply, 1 + the Debt-Equity Ratio.

\[ \text{Equity Multiplier} = \frac{\text{Total Assets}}{\text{Total Equity}} \]
\[ = \frac{94,408}{6,397} \approx 14.76 \text{ times} \]
Coverage Ratios:

**Times Interest Earned Ratio**
The Times Interest Earned ratio is calculated by dividing the Earnings before the deduction of Interest and taxes (EBIT) by the interest costs or expenses.

\[
\text{Times Interest Earned Ratio} = \frac{\text{Earnings before Interest and Taxes (EBIT)}}{\text{Interest}} = \frac{7430}{275} = 27.02 \text{ times}
\]

Covering interest expense should be the least of Boeing's concern as they cover their interest expense 27 times with their EBIT.

**Cash Coverage Ratio**
The cash coverage ratio is calculated by adding depreciation to the EBIT, essentially EBITD and then dividing this number by the interest expense.

\[
\text{Cash Coverage Ratio} = \frac{(\text{Earnings before Interest and Taxes} + \text{Depreciation})}{\text{Interest}} = \frac{(7430 + 1833)}{275} = 33.68 \text{ times}
\]

Again, as stated above, this high Cash coverage ratio suggests that covering interest expenses is not a major concern for Boeing should the economy go bad.

**Asset Management Ratios**
Asset Management Ratios depict the firm’s efficiency in using its assets, reflected in its ability to generate sales.

*Note:* For ‘Cost of Goods Sold’, the figures for cost of services and cost of products have been used and Boeing Capital interest expense has been omitted as instructed by Dr Kim.

**Inventory Turnover**
The Inventory Turnover is calculated by dividing cost of goods sold by Inventory.

\[
\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Inventory}} = \frac{(73466 + 8578)}{47257} = 1.74 \text{ times}
\]

At first glance, Boeing’s inventory turnover ratio looks poor, but we cannot make any conclusions until we have a look at the industry averages and its competitors. The slow turnover of inventory could be industry wide.
**Days Sales in Inventory**  
The Days’ Sales in Inventory is calculated by dividing 365 (number of days in a year) by the Inventory Turnover.

\[
\text{Days Sales in Inventory} = \frac{365}{\text{Inventory Turnover Ratio}}
\]

\[
= \frac{365}{1.74} \\
= 209.77 \text{ Days}
\]

**Effectively 210 Days**

This suggests that items spend 210 days as inventory.

**Receivables Turnover**  
The Receivables Turnover is calculated by dividing Sales by Accounts Receivable.

\[
\text{Receivables Turnover} = \frac{\text{Sales}}{\text{Accounts Receivable}}
\]

\[
= \frac{(\text{Sales of Products} + \text{Sales of Services})}{\text{Accounts Receivable}}
\]

\[
= \frac{(85 255 + 10 859)}{8 713}
\]

\[
= 11.03 \text{ times}
\]

**Days Sales in Receivables**  
The Days’ Sales in Receivables is calculated by dividing 365 (number of days in a year) by the Receivables Turnover.

\[
\text{Days Sales in Receivables} = \frac{365}{\text{Receivables Turnover Ratio}}
\]

\[
= \frac{365}{11.03} \\
= 33.09 \text{ Days}
\]

**Effectively 33 Days**

**Total Asset Turnover**  
The Total Asset Turnover is calculated by dividing Sales by the Total Assets of the company.

\[
\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Assets}}
\]

\[
= \frac{96 114}{94 408}
\]

\[
= 1.02 \text{ times}
\]

**Capital Intensity**  
The Capital Intensity is calculated by dividing Total Assets by Sales, essentially the inverse of the Total Asset Turnover.

\[
\text{Capital Intensity} = \frac{\text{Total Assets}}{\text{Sales}}
\]

\[
= \frac{94 408}{96 114}
\]

\[
= 0.98 \text{ times}
\]
Profitability Ratios

One of the key goals of any company is to generate profit/net income. Therefore, profitability ratios are used for measures the effectiveness in use of the firm's assets and operations management to generate profit.

Profit Margin
The Profit Margin is determined through dividing the Profit or Loss for the Year by the total Sales.

\[
\text{Profit Margin} = \frac{\text{Net Income}}{\text{Sales}} \\
= \frac{5176}{96114} \\
= 0.054 \\
= 5.4\% 
\]

Gross Margin
The Gross Margin is determined by dividing the Gross Profit or Loss for the Year (Sales - Cost of Goods Sold) by the total Sales.

\[
\text{Gross Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \\
= \frac{14026}{96114} \\
= 0.146 \\
= 14.6\% 
\]

Operating Margin
The Operating Margin is determined through dividing the Profit or Loss for the Year (Gross Profit - Operating Expenses) by the total Sales.

\[
\text{Operating Margin} = \frac{\text{Operating Profit}}{\text{Sales}} \\
= \frac{7443}{96114} \\
= 0.077 \\
= 7.7\% 
\]

EBT Margin
The Profit Margin is determined through dividing the Earnings before Interest and Taxes for the Year by the total Sales.

\[
\text{EBT Margin} = \frac{\text{EBT}}{\text{Sales}} \\
= \frac{7155}{96114} \\
= 0.074 \\
= 7.4\% 
\]
Return on Assets (ROA)
The Return on Assets is determined through dividing the Profit or Loss for the Year by the Total Assets.

\[
\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}} \\
= \frac{5176}{94408} \\
= 0.055 \\
= 5.5 \%
\]

Return on Equity (ROE)
The Return on Equity is determined through dividing the Profit or Loss for the Year by the Total Equity.

\[
\text{Return on Equity} = \frac{\text{Net Income}}{\text{Total Equity}} \\
= \frac{5176}{6397} \\
= 0.809 \\
= 80.9 \%
\]
Market Value Ratios

Market Value Ratios take the perspective of investors rather than of the actual firm. It depicts how the company is viewed financially as potential investment. (Share price as of close on 31/12/2015 - $ 144.59) (Shares outstanding 666.6 million as per Boeing Company Annual Report.)

Earnings per share
EPS is calculated by dividing the net income for the year by the total shares outstanding.

\[
Earnings \ per \ share = \frac{Net \ Income}{Shares \ Outstanding}
\]

\[
= \frac{5 176}{666,6}
\]

\[
= \$ \ 7.76
\]

Price Earnings ratio
PE Ratio is the price per share divided by the earnings per share, which essentially gives you what you pay per $1 of earnings.

\[
Price \ Earnings \ ratio = \frac{Price \ per \ Share}{EPS}
\]

\[
= \frac{144,59}{7.76}
\]

\[
= 18.63
\]

Market-to-Book Ratio
(Book Value per Share taken from Morning Star Financials)

\[
Market-to-Book \ Ratio = \frac{Market \ Value \ per \ share}{Book \ value \ per \ share}
\]

\[
= \frac{Market \ value \ per \ share}{(Total \ equity/Shares \ outstanding)}
\]

\[
= \frac{144,59}{(6397/666,6)}
\]

\[
= 15.07
\]

Price-Sales Ratio

\[
Price-Sales \ Ratio = \frac{Price \ per \ Share}{Sales \ per \ Share}
\]

\[
= \frac{144,59}{(96 114/666,6)}
\]

\[
= 1.003
\]
3. Financial Ratios - Trend Analysis

- All amounts in Millions of USD, except share data.
- All data taken from Morning Star Financials unless otherwise stated. Therefore, the figures for 2015 will differ from the results in question 2, as those were calculated directly from Boeing Company’s financial statements.

**Short Term Solvency Ratios**

**Current Ratio** = Current Assets / Current Liabilities

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.77</td>
</tr>
<tr>
<td>2007</td>
<td>0.86</td>
</tr>
<tr>
<td>2008</td>
<td>0.84</td>
</tr>
<tr>
<td>2009</td>
<td>1.07</td>
</tr>
<tr>
<td>2010</td>
<td>1.15</td>
</tr>
<tr>
<td>2011</td>
<td>1.21</td>
</tr>
<tr>
<td>2012</td>
<td>1.27</td>
</tr>
<tr>
<td>2013</td>
<td>1.26</td>
</tr>
<tr>
<td>2014</td>
<td>1.2</td>
</tr>
<tr>
<td>2015</td>
<td>1.35</td>
</tr>
</tbody>
</table>

We can see the trend for this ratio has generally increased overtime, thus making it more secure to short-term shocks such as a recession.

**Quick Ratio** = (Current Assets – Inventory) / Current Liabilities

(Source - Guru Focus)

<table>
<thead>
<tr>
<th>Year</th>
<th>Quick Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.5</td>
</tr>
<tr>
<td>2007</td>
<td>0.56</td>
</tr>
<tr>
<td>2008</td>
<td>0.34</td>
</tr>
<tr>
<td>2009</td>
<td>0.56</td>
</tr>
<tr>
<td>2010</td>
<td>0.46</td>
</tr>
<tr>
<td>2011</td>
<td>0.43</td>
</tr>
<tr>
<td>2012</td>
<td>0.43</td>
</tr>
<tr>
<td>2013</td>
<td>0.43</td>
</tr>
<tr>
<td>2014</td>
<td>0.44</td>
</tr>
<tr>
<td>2015</td>
<td>0.42</td>
</tr>
</tbody>
</table>

When compared to the current ratio however, we see a different picture with a significant fluctuation in the beginning due to the financial crisis and then plateauing off later on. We can therefore infer from this that not only does majority of Boeing’s current assets reside in its inventories which increased over time, but it’s also relatively light in terms of cash and...
other liquid assets which may make very special cases of short-term shock or emergencies that occur internally or in the market more challenging. This is because its inventory is more illiquid than other kinds of firms as selling aircraft and military equipment require tedious contract work, as opposed than simply restocking a supermarket chain. This is clearly reflected in the graph as when the great recession hit its peak in 2008, this meant that low sales resulted in a lot of leftover inventory and not enough cash flow which caused Boeing to burn through their more liquid assets, hence the huge discrepancy in 2008 between the current and quick ratio.

**Cash Ratio** = Cash / Current Liabilities
(Guru Focus)

Due to the highly fluctuating nature of cash reserves, we see corresponding volatility when it comes to their cash ratio. Due to the Great Recession in 2008, Boeing had to use roughly 50% of its cash reserves in order to cover their fixed costs as well as pay off short-term debt, hence a more notable than usual fluctuation in its cash balance.
Long Term Solvency Ratios / Financial Leverage Ratios

**Leverage Ratios:**

**Total Debt Ratio** = (Total Assets – Total Equity) / Total Assets

We can see from this that whilst the ratio was low at first, the resulting financial crisis and global recession devastated their cash flows which took a toll on their assets, thus forcing Boeing to rely more on debt in order to sustain their operations.

**Debt Equity Ratio** = Total debt / Total Equity

The trend in this graph follows the previous graph very similarly, but is generally more volatile, due to the fact that while assets did dip in 2008, total equity dropped massively. This was due to the fact that Boeing had overvalued its pension fund’s assets, but as market corrections set in, Boeing then wrote down its value, thus resulting in a reduction in total equity. As markets returned to normalcy, this ratio then fell as equity rose again, and eventually tapered off.
Equity Multiplier = Total Assets / Total Equity

Coverage Ratios:

Times Interest Earned Ratio = Earnings before Interest and Taxes (EBIT) / Interest

As this graph shows, even during the recession, Boeing was still more than healthy enough to be able to pay off its interest expenses. This is a sign of a healthy successful company.
**Cash Coverage Ratio** = (Earnings before Interest and Taxes + Depreciation)/ Interest

![Cash Coverage Ratio Chart](chart)

Similarly, with the other graph, this displays Boeing’s ability to pay off its interest expenses, as both graphs follow a very similar trend, it can be assumed (and later confirmed through the income statement) that Boeing’s annual depreciation expenses are quite constant as if it were otherwise, we’d see noticeable deviations from the trend of the previous graph.

**Asset Management Ratios**

**Inventory Turnover** = Cost of Goods Sold / Inventory

![Inventory Turnover Chart](chart)

This trend shows an initially good management of its inventory, but this has since dropped significantly, as Boeing has grown its inventory at a faster rate than its cost of goods sold, or subsequently its demand has.
Days Sales in Inventory = 365 / Inventory Turnover Ratio

Having been derived from this previous item, we can see that as a result of the inventory turnover ratio having gone down, the Days sales in inventory has then therefore gone up as units stay in inventory for far longer than before. This could become a potential problem if the management does not notice and deal with the issue.

Receivables Turnover = Sales / Accounts Receivable

The ratio has seen little fluctuation with moderate jumps and dips throughout. While sales had moderate growth from 2006 to 2011, the main recovery of the global economy from 2012 onwards boosted sales by a significant margin. This then signaled to Boeing that they could be more lenient with their credit allowances to customers, and accepted more accounts receivable, hence the recent drop in the ratio.
**Days Sales in Receivables** = 365 / Receivables Turnover Ratio

This graph’s trend follows a rough inverse of the previous trend’s shape, having used the figures from the previous ratio to derive the figures for this one. Having mean days sales in receivables figure of 30 days shows a relatively healthy allowance to be more lenient with customers without damaging the firm’s opportunity costs for the cash it is yet to receive.

**Total Asset Turnover** = Sales / Total Assets

Though sales had initially outpaced the assets prior to 2010, afterwards however the growth assets then overtook, but just by relatively small margins, that of sales. As mentioned previously, Boeing had started to increase its inventory stockpiles at roughly around the same time, and as such is what this increase in assets can be attributed to. On a larger perspective however, these are very minimal fluctuations, and it can be assumed to a great extent that sales are more or less keeping up with total assets, especially in recent years. This therefore shows a rather effective use of assets in order to generate revenue.
Profitability Ratios

Profit Margin = Net Income / Sales

While profit margins did severely dip during the great recession, it has however returned to its normalcy. Though they’re currently at a relatively higher than average level, on an absolute basis, it’s still quite low. This is mainly due to the fact that not only does Boeing have high R&D costs, but those of manufacturing as well.

Gross Margin = Gross Profit / Sales

Due to the fact that this graph doesn’t in the slightest follow the trend of the previous graph, it can be inferred that their cost of goods sold has had a significant impact on Boeing as during a period where net margin was generally on the rise, gross margin was definitely falling. This gives further proof of the high cost of goods sold mentioned in the previous graph, hence a recent drive by the company to start figuring out ways on how to reduce manufacturing and material costs.
**Operating Margin** = Operating Profit / Sales

**Operating Margin (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>4.9</td>
</tr>
<tr>
<td>2007</td>
<td>8.78</td>
</tr>
<tr>
<td>2008</td>
<td>6.49</td>
</tr>
<tr>
<td>2009</td>
<td>3.07</td>
</tr>
<tr>
<td>2010</td>
<td>7.73</td>
</tr>
<tr>
<td>2011</td>
<td>8.47</td>
</tr>
<tr>
<td>2012</td>
<td>7.7</td>
</tr>
<tr>
<td>2013</td>
<td>7.58</td>
</tr>
<tr>
<td>2014</td>
<td>8.23</td>
</tr>
<tr>
<td>2015</td>
<td>7.74</td>
</tr>
</tbody>
</table>

It can be easily noticed that this graph closely follows the trend of the profit margins graph as it accounts for similar aspects, except for interest and tax expenses. As it does not account for these additional expenses, the figures that ratio should only be higher than those of the net margin.

**EBT Margin** = EBT / Sales

**EBT Margin (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>5.19</td>
</tr>
<tr>
<td>2007</td>
<td>9.22</td>
</tr>
<tr>
<td>2008</td>
<td>6.56</td>
</tr>
<tr>
<td>2009</td>
<td>2.54</td>
</tr>
<tr>
<td>2010</td>
<td>7.01</td>
</tr>
<tr>
<td>2011</td>
<td>7.85</td>
</tr>
<tr>
<td>2012</td>
<td>7.23</td>
</tr>
<tr>
<td>2013</td>
<td>7.19</td>
</tr>
<tr>
<td>2014</td>
<td>7.86</td>
</tr>
<tr>
<td>2015</td>
<td>7.44</td>
</tr>
</tbody>
</table>

As with the previous graph, it is unsurprising that this graph’s trend is very similar to the trend of the net margin graph due to the fact that each take into account the same elements, except for tax expenses that the EBT margin does not account for. Of worth noting however is the fact that from 2006 to 2008, the EBT’s values are actually higher than the operating margins for that interval.
Return on Assets (ROA) = Net Income / Total Assets

It is rather interesting that despite this graph not dealing with sales, its trend shape is extremely similar to the profit margin graph. Recalling the total asset turnover graph and figures, we see that sales and total assets have practically been equal, with just small deviations from the value of 1. As both the return on assets and net margin ratios using net income as their numerator, this therefore results in very similar values being generated. With the ROA in recent years generally tending around 5, it can be said that the company makes and effective, but not efficient use of its assets in order to generate profits.

Return on Equity (ROE) = Net Income / Total Equity

Due to the fact that net income has been relatively stagnant for Boeing over many years now, we can see that the volatility in this graph should then mainly stem from total equity. As was mentioned several graphs back, Boeing devalued its pension fund, which consequently dropped its total equity. This resulted in the large spike in 2009’s ROE. Onwards from 2009, total equity slowly started to rise again whilst net profits hardly raised, hence the gradual downtrend on the ROE. On an isolated level, this falling ratio would suggest that Boeing doesn’t make very efficient use of investors’ money in order to generate greater profits. In reality however, investors’ money would generally be placed more
towards generating greater revenue (which has been consistently growing at a considerable margin) rather than aid in cutting costs.

**Market Value Ratios**

**Earnings per share** = Net Income / Shares Outstanding

The Earnings per share for Boeing has increased over time that is very good for potential investors. We can attribute this increase to an increase in Boeing’s Net Income.

**Price Earnings ratio** = Price per Share / EPS

The PE ratio for Boeing has fallen drastically over the years. This can be because of an increase in Boeing’s earnings per share over the years.
**Market-to-Book Ratio** = Market Value per share / Book value per share

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>6.4</td>
<td>7.5</td>
<td>-33.3</td>
<td>18.5</td>
<td>17.4</td>
<td>9.2</td>
<td>9.7</td>
<td>11.4</td>
<td>6.3</td>
<td>14.3</td>
</tr>
</tbody>
</table>

The market to book ratio has increased but only slightly over the years. As a result, potential investors may not think much about this increase. This increase can be credited to an increase in Boeing’s Market Value per Share.

**Price-Sales Ratio** = Price per Share / Sales per Share

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>1.2</td>
<td>1.1</td>
<td>0.5</td>
<td>0.6</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

The Price to sales ratio has remained constant over the last 10 years, ignoring the impact of the financial crisis. Thus, it is evident that the sales have increased in equal relation to the stock price over the last 10 years.
4. Peer Analysis – Industry Average

1. Profitability:

<table>
<thead>
<tr>
<th></th>
<th>Boeing Company</th>
<th>Industry average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit Margin</td>
<td>5.4%</td>
<td>7.88%</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>14.6%</td>
<td>22.71%</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>7.7%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

Seen from different levels of margin as shown in the data, the Boeing Company ratio is far below the industry average, which means the company may not be maximizing its profits to full extent. One step further, the operating margin ratio performs the worst among other ratios, which may imply that other operating expenses like wages and depreciation take up a huge proportion in Boeing Company’s cost composition.

2. Management Effectiveness:

<table>
<thead>
<tr>
<th></th>
<th>Boeing Company</th>
<th>Industry average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets</td>
<td>5.5%</td>
<td>3.95%</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>80.9%</td>
<td>41.89%</td>
</tr>
</tbody>
</table>

The higher ROA ratio may represent Boeing Company’s higher proficiency in manipulating and utilizing the asset to generate profit efficiently. As for the ROA ratio, it is almost two times that of the industry average. Seen from the surface level, it may reveal that the company is able to generate more profit with respect to the money shareholders have invested. However, through using the DuPont analysis, it can be deduced that Boeing’s Company may not be doing well with regard to its asset financing, which will be illustrated in the analysis of Part 5.

3. Financial Strength:

<table>
<thead>
<tr>
<th></th>
<th>Boeing Company</th>
<th>Industry average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ratio</td>
<td>1.35 times</td>
<td>1.38 times</td>
</tr>
<tr>
<td>Quick ratio</td>
<td>0.42 times</td>
<td>0.84 times</td>
</tr>
<tr>
<td>Total Debt to Equity</td>
<td>13.76 times</td>
<td>1.82 times</td>
</tr>
</tbody>
</table>

Whilst its current ratio remains roughly the same with the industry average, the difference between its quick ratio and the average has been amplified significantly. The underlying reason can be that the company may hold too much inventory and thus it may become doubtful whether it will be capable of addressing its current liability appropriately. Also, it should be noticed that the Total Debt to Equity ratio are approximately ten times of the average one, which may warn the potential external investors about its risk management capability.
4. Asset management:

<table>
<thead>
<tr>
<th></th>
<th>Boeing Company</th>
<th>Industry average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory turnover</td>
<td>1.74 times</td>
<td>6.94 times</td>
</tr>
<tr>
<td>Receivables Turnover</td>
<td>11.03 times</td>
<td>6.93 times</td>
</tr>
<tr>
<td>Asset Turnover</td>
<td>1.02 times</td>
<td>0.85 times</td>
</tr>
</tbody>
</table>

It turns out that the company is doing well in turning asset and receivables into sales according to the higher turnover rate of both asset and receivables. However, the inventory turnover ratio has demonstrated a sharp drop compared to the industry average. Also, combined with the financial strengths analysis, the company may encounter problems of turning its huge amount of inventory into actual sales. However, considering its unique operating and manufacturing nature, it may deem reasonable for its lower inventory turnover rate.

5. Market Value:

<table>
<thead>
<tr>
<th></th>
<th>Boeing Company</th>
<th>Industry average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Earnings ratio</td>
<td>18.63</td>
<td>22.81</td>
</tr>
<tr>
<td>Price to Book ratio</td>
<td>15.07</td>
<td>28.87</td>
</tr>
<tr>
<td>Price to sales ratio</td>
<td>1.003</td>
<td>1.52</td>
</tr>
</tbody>
</table>

The relatively lower PE ratio may indicate that the investors’ expectation of Boeing Company’s future growth is below the industry average. Also, the Boeing Company’s stock may be undervalued in comparison with the average according to Price to Book ratio. The analysis above corresponds well with the huge deviation between its Price to Sales ratio and the average one. The underlying business implication for the Boeing Company can be that it should spare no effort in increasing its actual sales in order to regain confidence from the investors and market.
4B. Peer Analysis - UTX

United Technologies Corporation: Following the comparison between Boeing and the industry averages in the aerospace industry, we will now look at Boeing’s figures against United Technologies Corporation. This is crucial because a company such as Boeing, is not interested in merely beating the average, but rather their priority would be to outdo all of their competitors. Now, we will compare Boeing to UTX, one of its major competitors.

United Technologies Corporation or UTX specializes in research, development and manufacturing of technology in multiple fields, but most notable perhaps is its Aerospace manufacturing unit UTC Aerospace systems. UTX with this aerospace division is perhaps Boeing’s biggest threat. Below we will compare the financial ratios of the two aerospace giants:

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Boeing</th>
<th>United Technologies Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>1.35 times</td>
<td>1.18 times</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>0.42</td>
<td>0.78 times</td>
</tr>
<tr>
<td>Cash Ratio</td>
<td>0.239 times</td>
<td>0.3128 times</td>
</tr>
<tr>
<td>Total Debt Ratio</td>
<td>0.932 times</td>
<td>0.6872 times</td>
</tr>
<tr>
<td>Debt-Equity Ratio</td>
<td>1.38 times</td>
<td>0.71 times</td>
</tr>
<tr>
<td>Equity Multiplier</td>
<td>14.90 times</td>
<td>3.197 times</td>
</tr>
<tr>
<td>Cash Coverage Ratio</td>
<td>24.28 times</td>
<td>9.6867 times</td>
</tr>
<tr>
<td>Times Interest earned</td>
<td>27.02 times</td>
<td>7.8 times</td>
</tr>
<tr>
<td>Inventory Turnover Ratio</td>
<td>1.75 times</td>
<td>4.49 times</td>
</tr>
<tr>
<td>Days Sales in Inventory</td>
<td>209.01 days</td>
<td>81.25 days</td>
</tr>
<tr>
<td>Receivables Turnover Ratio</td>
<td>11.69 times</td>
<td>5.11 times</td>
</tr>
<tr>
<td>Days Sales in Receivables</td>
<td>31.22 days</td>
<td>71.42 times</td>
</tr>
<tr>
<td>Total Asset Turnover</td>
<td>0.99 times</td>
<td>0.63 times</td>
</tr>
<tr>
<td>Profit Margin</td>
<td>5.38 %</td>
<td>13.56%</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>5.34%</td>
<td>8.51%</td>
</tr>
</tbody>
</table>
### Return on Equity

<table>
<thead>
<tr>
<th></th>
<th>Boeing</th>
<th>UTX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>68.96%</td>
<td>25.98%</td>
</tr>
</tbody>
</table>

### Earnings per share

<table>
<thead>
<tr>
<th></th>
<th>Boeing</th>
<th>UTX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>7.44 $</td>
<td>8.61 $</td>
</tr>
</tbody>
</table>

### Price-Earnings Ratio

<table>
<thead>
<tr>
<th></th>
<th>Boeing</th>
<th>UTX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times</td>
<td>24.1 times</td>
<td>22.7 times</td>
</tr>
</tbody>
</table>

### Market-To-Book Ratio

<table>
<thead>
<tr>
<th></th>
<th>Boeing</th>
<th>UTX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times</td>
<td>15,07 times</td>
<td>2.9 times</td>
</tr>
</tbody>
</table>

### Short term Solvency:

Boeing has a slightly better liquidity position as compared to UTX with current ratio of 1.35 times as compared to UTXs. UTX has the higher cash ratio with 0.3128 as compared to 0.239 of Boeing. However, these short-term liquidity ratios are of little help when we analyze companies in the aerospace industry. In such industries the amount of fixed capital required is extremely high and seldom are these funded via short-term debts or current liabilities. Therefore, these ratios are not very useful in comparing the two companies.

### Long term Solvency:

Boeing seems to be doing better in the long term. It has a higher debt-equity ratio (94% higher) however it also has a considerably higher Total debt ratio (36% higher) and Equity multiplier (14.90 compared to UTX’s 3.197). This means that it has more debt than UTX and the majority of its assets are also funded by long-term debt. This is not a good sign for the investors. Although UTX has a lower debt-equity ratio it does also have a lower total debt ratio and lower equity multiplier, indicating it has a lower overall debt. This is a good sign for potential and current investors.

### Asset utilization:

Boeing makes more efficient utilization of its assets. It has a higher Total Asset turnover ratio and a lower capital intensity ratio than UTX. This indicates that it uses its assets more effectively to generate sales. Boeing has a much lower inventory turnover ratio than UTX. We believe that comparing inventory turnover is not very useful in such industries as the inventory is bound to move slowly when dealing with goods of this nature.

### Profitability:

Perhaps profitability ratios are one of the most important when investors make their investment decision. In this regard UTX has a profit Margin that is 152% higher than that of Boeing. Its Return on assets is also considerably higher indicating it utilizes its assets more efficiently to generate income. Interestingly, Boeing has a much higher Return on Equity. We will discuss why this is in the next section. However, we feel that UTX is the more profitable of the two.

### Market Value ratios:

Market Value ratios are also vital when making an investment decision and are perhaps the deciding factor in many investor’s choices. In this regard, UTX has higher earnings per share (15.72% higher), however, this is not valid for comparison as the ratio is heavily affected by shares outstanding. Thus, earnings per share are only useful for comparing one company over a period of time. Boeing has a slightly higher Price earnings ratio at 24.1. Whilst this does indicate growth potential, UTX is not far behind either with a Price Earnings ratio of 22.7.

Boeing – Financial Analysis
5. ROE and Du Pont Identity Analysis

In this section, we will analyse the Return on Equity (ROE) ratio and the Du Pont Identity of Boeing Company as well as three of its competitors, namely General Dynamics (GD), Lockheed Martin and United Technologies Corporation (UTX). Through the analyses, the companies’ profitability and efficiency on allocating the assets and equity can be effectively presented. As before, all amounts are in millions of USD.

Calculations

Boeing Company

\[ ROE = \frac{\text{Profit Margin}}{\text{Total Asset Turnover}} \times \frac{\text{Equity Multiplier}}{\text{Equity Multiplier}} \]

\[ = \frac{5,176}{96,114} \times \frac{94,408}{6,397} \]

\[ = 0.0539 \times 1.0181 \times 14.7582 \]

\[ = 0.8091 = 80.91\% \]

General Dynamics

\[ ROE = \frac{\text{Profit Margin}}{\text{Total Asset Turnover}} \times \frac{\text{Equity Multiplier}}{\text{Equity Multiplier}} \]

\[ = \frac{2,965}{31,469} \times \frac{31,997}{10,738} \]

\[ = 0.09422 \times 0.9835 \times 2.9788 \]

\[ = 0.2761 \]

\[ = 27.61\% \]

Lockheed Martin

\[ ROE = \frac{\text{Profit Margin}}{\text{Total Asset Turnover}} \times \frac{\text{Equity Multiplier}}{\text{Equity Multiplier}} \]

\[ = \frac{3,605}{46,132} \times \frac{49,128}{3,097} \]

\[ = 0.07815 \times 0.9390 \times 15.8631 \]

\[ = 1.1641 = 116.4\% \]

United Technologies Corporation (UTX)

\[ ROE = \frac{\text{Profit Margin}}{\text{Total Asset Turnover}} \times \frac{\text{Equity Multiplier}}{\text{Equity Multiplier}} \]

\[ = \frac{7,966}{56,098} \times \frac{87,484}{28,844} \]

\[ = 0.1420 \times 0.6412 \times 3.0330 \]

\[ = 0.2762 = 27.62\% \]
Interpretation of calculations

**Difference between Boeing and GD**

\[
ROE \text{ Difference} = |ROE \text{ of Boeing} - ROE \text{ of GD} | \\
= |0.8091 - 0.2761| \\
= 0.533 = 53.3\%
\]

The ROE difference between Boeing and GD is the greatest, among the four companies. Although the Profit Margin of Boeing (0.0539) is lower than that of GD's (0.09422), due to the significantly higher value of Equity Multiplier (11.779 difference) and the slightly larger value of Total Asset Turnover (0.0346 difference) for Boeing, Boeing’s ROE (0.8091) is 0.533 greater than GD’s ROE (0.2761). These figures show that Boeing had a great profitability in general (high ROE) and efficiency on allocating the assets (high Total Asset Turnover). However, at the same time, the high ratio in Equity Multiplier also indicate that a large proportion of Boeing’s asset financing is attributed to debts. It will be risky for the business operation and, hence, from the perspective of investors, investment.

**Difference between Boeing and Lockheed**

\[
ROE \text{ Difference} = |ROE \text{ of Boeing} - ROE \text{ of Lockheed} | \\
= |0.8091 - 1.1640| \\
= 0.3549 = 35.49\%
\]

The ROE difference between Boeing and Lockheed is the smallest, among the four companies. Boeing has higher Total Asset Turnover (0.0791 difference), while Lockheed has higher Profit Margin (0.02425 difference) and Equity Multiplier (1.1049 difference). Therefore, they lead to the fact that Boeing’s ROE (0.8091) is 0.3549 lower than that of Lockheed’s (1.1640). Compare to other companies, Lockheed has a comparatively similar Du Pont Identity and ROE to Boeing’s. However, according to the ratios, Lockheed is shown to have greater profitability (higher ROE) than Boeing.

**Difference between Boeing and UTX**

\[
ROE \text{ Difference} = |ROE \text{ of Boeing} - ROE \text{ of UTX} | \\
= |0.8091 - 0.2762| \\
= 0.5329 = 53.29\%
\]

The ROE difference between Boeing and UTX, which is close to the difference between Boeing and GD, is the second greatest (0.5329). Boeing has higher Total Asset Turnover (0.3769 difference) and Equity Multiplier (11.7252 difference) while UTX has higher Profit Margin (0.0881). The figures show that, similar to the comparison between Boeing and GD, Boeing has greater profitability (high ROE) and the efficiency on allocating the assets (high Total Asset Turnover). However, at the same time, the high Equity Multiplier indicates that a large portion of Boeing’s asset financing is attributed to debts. In other words, it is risky for business operation and investment.
6. Conclusion and Investment recommendation

Whether we would recommend investing in Boeing primarily involves looking into several of the above ratios. We want to look at the general trend of these ratios and how these ratios size up against the industry average and competitors.

Short Term Solvency:
As for the industry, Boeing’s current ratio seems to be on par, however, its quick ratio is half of the industry average, signaling that they are holding too much inventory and not enough other liquid assets. If another recession were to start, we would seem them suffer as they did in 2008.

Long term Solvency:
Since the financial crisis, Boeing has managed to improve most of their leverage ratios signaling a good recovery from the recession. As the company has grown again, they have since taken on more debt. In terms of industry comparison, Boeing is worse off than the industry, which could signal potential problems in the future.

Asset utilization:
There has been a decline in the efficiency of inventory turnover and consequently an increase in the number of days in inventory. This could be dangerous if it goes unnoticed by management. Boeing is significantly worse off in the inventory ratios than the industry. However, they are superior when it comes to managing receivables and utilizing assets.

Profitability:
Other than the financial crisis of 2008, Boeing’s profitability has been relatively stable. However, a major concern for Boeing should be their profit margins when comparing to industry averages as well as major competitors. To showcase this, we may have a look at the operating margin of Boeing of 7.7% and the industry Operating margin of almost 13%. If this issue is not addressed, it could spell major potential problems for their future, as competitors will surpass them.

Market Value ratios:
Again, these ratios were heavily impacted by the 2008 crisis. There is a clear upward trend of EPS since 2006 which shows that the net income has been steadily increasing. Also, it is evident that their sales have been steadily growing along with the share price. As for comparison with the industry, we have seen that Boeing’s performance is significantly below par. Although it appears that the company is not doing too well, it has become evident that it trades relatively cheaper when compared to its industry. It has a market-to-book ratio of 15.7 compared to 28.87 of the market. In addition, UTX, a major competitor, trades even cheaper at 2.9 times. However, simply because a company is trading cheaply, it does not signal that it is a good buy.

The above analysis, undoubtedly makes it clear that one would not recommend an investor to invest in Boeing as of December 31 2015.
References: