**ACC203 Spring 2019 Data Analysis Project**

**Selection of your company** (feel free to modify here)

* Each student will be assigned a company from S&P 100 index. (Faculty: please refer to page 4 for more details)
* Please check to make sure your assigned company has at least 11 years of history.

**Requirements:**

Find the 10-K reports for the past ten years for your firm and the **competitor**. Use Excel for the following requirements.

**How to find 10-k reports**

|  |  |  |
| --- | --- | --- |
|  | **Source** | **How to access** |
| 1 | **Google Finance** | * You can find your firm’s ticker symbol at Google Finance. * Go to google finance at [www.google.com/finance](http://www.google.com/finance) and enter your firm’s name in the ‘Search Finance’ box on top of the screen. Google will show the exchange (e.g. NASDAQ, NYSE) and ticker (e.g. AAPL for Apple, F for Ford) next to the firm name. |
| 2 | **SEC filings**  (1) 10-K | * The 10-K is the annual report filed to the SEC by publicly traded companies. It contains ‘Items’ with the firm’s information on its products, competition, risk factors, financial statements, and the independent auditor’s report, among others. * To access financial statements, follow the steps below:  1. Go to the SEC website at www.sec.gov. 2. Click on “More Search Options” under the search bar at the top right side of the screen. 3. Enter the company name or the ticker symbol in the corresponding box under ‘Search Company Filings’ and click ‘Find Companies.’ Ticker will give you faster results. 4. The next screen will show Search Results. Enter ‘10-K’, in the box for ‘Filing Type.’ 5. Click on ‘Interactive Data’ and then the financial statements. 6. Click on ‘View Excel Document’ and save the document(s) to your hard drive. |

1. List last eleven-year net incomes of your company and the competitor. Calculate their means, annual growth rate, mean annual growth rates, and standard deviations (STD) in Excel. Copy the results below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Fiscal year end date | Your firm’s Net Income (NI) ($millions) | *Your firm’s NI Annual Growth rate (%)* | Competitor firm’s Net Income ($millions) | *Competitor’s NI*  *Annual Growth rate (%)* |
| 1 | 2008 | 6119 | NA | 17681 | NA |
| 2 | 2009 | 8235 | 35% | 14569 | -18% |
| 3 | 2010 | 14013 | 70% | 18760 | 29% |
| 4 | 2011 | 25922 | 85% | 23150 | 23% |
| 5 | 2012 | 41733 | 61% | 16978 | -27% |
| 6 | 2013 | 37037 | -11% | 21863 | 29% |
| 7 | 2014 | 39510 | 7% | 22074 | 1% |
| 8 | 2015 | 53394 | 35% | 12193 | -45% |
| 9 | 2016 | 45687 | -14% | 16798 | 38% |
| 10 | 2017 | 48351 | 6% | 21204 | 26% |
| 11 | 2018 | 59351 | 23% | 16571 | -22% |
| Mean |  | 34503 | 30% | 18349 | 4% |
| STD |  | 18366 | 34% | 3430 | 29% |

1. Create their time-series plots of net income annual growth rates for the two firms in one figure using Excel and copy and paste it here.
2. Net Income growth analysis: explain in plain English what these numbers of the two companies in requirement 1 and in requirement 2 suggest. What is the main takeaway of your analysis of these results?

|  |
| --- |
| My main takeaway is that Apples net income growth rate average is much higher than Microsoft (30% compared to 4%). Apple’s net income % growth peak is more than twice as much as Microsoft. The trends of their growth rates have little relation depending on year according to the graph. Apple’s STD of net income ($18,366) is higher compared to Microsoft ($3,430), meaning values around the net income average are more widely dispersed in Apple’s case. According to this analysis, Apple is a more efficient company regarding net income increase % per year. However, net income isn’t necessarily the best factor of deciding who is better since it is not scaled by assets. But if I were to invest in a company solely based on NI growth rate it would be Apple |

1. Find and compare last ten year ROA’s (Net Income/[(Beginning Total assets + Ending total assets)/2] of your company and the competitor. Calculate their means and standard deviations (STD) in Excel.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Fiscal year end date | Your firm’s Net Income (NI) ($millions) | *Your firm’s ROA (%)* | Competitor firm’s Net Income ($millions) | *Competitor firm’s ROA (%)* |
| 1 | 2008 | 6119 | NA | 17681 | NA |
| 2 | 2009 | 8235 | 18% | 14569 | 19% |
| 3 | 2010 | 14013 | 22% | 18760 | 23% |
| 4 | 2011 | 25922 | 27% | 23150 | 24% |
| 5 | 2012 | 41733 | 29% | 16978 | 15% |
| 6 | 2013 | 37037 | 19% | 21863 | 17% |
| 7 | 2014 | 39510 | 18% | 22074 | 14% |
| 8 | 2015 | 53394 | 20% | 12193 | 7% |
| 9 | 2016 | 45687 | 15% | 16798 | 9% |
| 10 | 2017 | 48351 | 14% | 21204 | 10% |
| 11 | 2018 | 59531 | 16% | 16571 | 7% |
| Mean |  | 34503 | 20% | 18349 | 15% |
| STD |  | 18366 | 5% | 3430 | 7% |

1. Create their time-series plots of ROA’s of the two firms in one figure using Excel and copy and paste it here.
2. ROA analysis: Explain in plain English what these numbers of the two companies in requirement 4 and in requirement 5 suggest. What is the main takeaway of your analysis of these results?

|  |
| --- |
| My main takeaway is that there is a steady downward trend (beginning around years 2011-2012) with return on assets from both companies. Both companies has similar upward and downward trends throughout the years with ROA%. ROA is better for analysis of who is the more efficient company since we can remove the scale of size in analysis where before we were just assuming the companies had similar scales. Apple’s average ROA % is 20% compared to Microsoft’s 15%. This mean Apple earns a higher percentage of profit in relation to its overall sources. A company that optimizes it resources and gets the better return is what I would invest in, which is Apple in this case. |