# Financial Statement Analysis Final Report

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**MGMT 194 SP2021**
**Group #5**

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**Prepared for: Professor Chuchu Liang**
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Thank you for your time reviewing this report.

Best regard,
All members from Group 5

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# Overview

We chose Microsoft Corporation as the target company. With the advancement of the information technology industry, we believe that such a company connecting both computer hardware and software development can have enough prospects to study. In this industry, Microsoft is one of the companies that have the most potential. The three main competitors are Apple, Dell, and Hewlett-Packard (HP).

# Purpose

The main purpose of this report is to analyze the financial performance of Microsoft. This analysis is reported to benefit audiences who do not have a financial background to understand a company's performance and make a better decision on their investment. On the cover page, we indicated it is prepared for Professor Chuchu Liang. In our case, we pretend Professor Liang is any other financial statement analysis customer who knows limited knowledge about accounting and finance. We prepared it best to support their needs and understand the market and industry for their further investment.

# Scope

The financial analysis is based on the Annual Report of 2017 to 2020. There are also supporting materials used throughout the analysis section. The resource is cited in the reference section. The latest data is collected on June 10, 2021.

# Market and Industry

## Industry Segment Overview

The information technology (IT) sector comprises companies that produce software, hardware, or semiconductor equipment, or companies that provide internet or related services. The three major industry groups within the IT sector are software and services, technology hardware and equipment, and semiconductors.

The software and services industry group is made up of companies that provide internet services, as well as companies that provide software and IT services. Internet services include companies that provide online databases or interactive services, such as search engines or social networks. IT services include companies that provide IT consulting or data processing services to other companies.

Technology hardware and equipment are broken down into three industries: communications equipment, technology hardware, storage and peripherals, and electronic equipment, instruments, and components. Communication equipment includes routers, telephones, and switchboards; Technology hardware, storage, and peripherals include computers, printers, and cell phones; Electronic equipment, instruments, and components include companies that make equipment like barcode scanners, transformers, and security systems, as well as companies that are distributors or Original Equipment, Manufacturers. An OEM is a company that makes parts or components that are used in another company's end product. Examples of companies that produce technology hardware and equipment include Microsoft, Apple, HP, Dell, and Cisco Systems.

## Information Technology Industry Segment

Microsoft is affiliated with two sub-industries of the information technology sector: the software and services industry and the technology hardware and equipment industry.

In the Software development industry segment, it can be broken into two segments-one in which the primary product is a suite of software and services offered via a perpetual license agreement (the customer purchases the software), and one in which a combination of software and services is offered as a tailored solution to a vertical market's recurring need (customers usually contract for services). A classic example of the first segment would be a software developer selling database management systems; a typical instance of the second would be a company selling transaction-processing solutions to financial institutions. Competition is a common theme in this industry. Entry into this industry is not uncommon, but its competitive nature requires the newcomer to be able to sustain a technological and product marketing edge over its larger rivals. The rapid increases in data processing speeds have provided the foundation on which suites of complex software applications and interfaces could be developed and deployed, bringing the potential for greater efficiency and productivity to nearly every kind of business. Accordingly, the demand for computer software and services can be characterized as robust.

The computer hardware market consists of sales of computer hardware and related services by entities that provide computer hardware including personal computers (PCs), laptops and tablets, computer storage devices, peripheral equipment, etc. The computer hardware market is segmented into computer peripheral equipment, computer storage devices, servers, and computers. The computer hardware market is expected to have rapid growth in investments in many countries globally. Smart city technologies use information and communication technologies to efficiently manage and operate urban services including transportation systems, water supply, and law and order. These technologies are enabled through IoT technology. IoT is a convergence of computing devices, mechanical and digital objects. This system facilitates the transfer of data over a network without human interaction and minimal human-to-computer interaction.

# Microsoft Introduction

Microsoft Corporation is an American multinational technology company with headquarters in Redmond, Washington. It develops, manufactures, licenses, supports, and sells computer software, consumer electronics, personal computers, and related services. Its best-known software products are the Microsoft Windows line of operating systems, the Microsoft Office suite, and the Internet Explorer and Edge web browsers. Its flagship hardware products are the Xbox video game consoles and the Microsoft Surface lineup of touchscreen personal computers. It was the world's largest software maker by revenue as of 2016. It is considered one of the Big Five companies in the U.S. information technology industry, along with Google, Apple, Amazon, and Facebook.

# Strategies

## Reinvent Productivity and Business Processes

Provide technology and resources to help customers navigate a remote environment and family of products play key roles in the way to work, learn, and connect.

Microsoft's growth depends on securely delivering continuous innovation and advanced leading productivity and collaboration tools and services like the office. Microsoft 365 brings together Office 365, Windows 10, and Enterprise Mobility + Security to help organizations empower their employees with AI-backed tools that unlock creativity, increase teamwork, and fuel innovation, all the while enabling compliance coverage and data protection. Microsoft Teams is enabling rapid digital transformation by giving people a single tool to chat, call, meet, and collaborate.

### Competition

Competitors to Office include software and global application vendors, such as Apple, Google, Skype, IBM, Zoom, and numerous web-based and mobile application competitors. Apple distributes versions of its pre-installed application software, such as email and calendar products, through its PCs, tablets, and phones. Google provides a hosted messaging and productivity suite. Skype also competes with a variety of instant messaging, voice, and video communication providers, ranging from start-ups to established enterprises.

## Build the Intelligent Cloud and Intelligent Edge Platform

It includes server products and cloud services. In the new remote world, companies have accelerated their digital transformation to empower their employees, optimize their operations, engage customers, and in some cases, change the very core of their products and services. Microsoft strives to partner with organizations on their digital and makes a transformation investment in data centers and other hybrid and edge infrastructure to support the customers' services.

### Competition

Server products face competition from a wide variety of server operating systems and applications offered by companies with a range of market approaches. Vertically integrated computer manufacturers such as Hewlett-Packard, IBM, and Oracle offer their versions of the Unix operating system preinstalled on server hardware. Nearly all computer manufacturers offer server hardware for the Linux operating system and many contribute to Linux operating system development.

## Create More Personal Computing

Make computing more personal by putting users at the core of the experience, enabling them to interact with technology in more intuitive, engaging, and dynamic ways. Typically it usually consists of Office, Windows, and other PC devices together.

**Competition**

Windows face competition from various software products, alternative platforms, and devices, mainly from Apple and Google. Devices face competition from various computer, tablet, and hardware manufacturers who offer a unique combination of high-quality industrial design and innovative technologies across various price points. These manufacturers, many of which are also current or potential partners and customers, include Apple, Dell, and Hewlett-Packard.

# SWOT Analysis

## Internal Strength

- Reinvent Productivity and Business Processes.
- Build the Intelligent Cloud and Intelligent Edge Platform.
- Create More Personal Computing.

## Internal Weakness

- Significant investments in products and services that may not achieve expected returns.
- Acquisitions, joint ventures, and strategic alliances may have an adverse effect on business.
- Cyberattacks and security vulnerabilities could lead to reduced revenue, increased costs, liability claims, or harm to reputation or competitive position.
- Advertising, professional, and social platform abuses.

## External Opportunities

- Transforming the workplace to deliver new modern, modular business applications to improve how people communicate, collaborate, learn, work, play, and interact with one another.
- Building and running cloud-based services in ways that unleash new experiences and opportunities for businesses and individuals.
- Applying AI to drive insights and act on the customer's behalf by understanding and interpreting their needs using natural methods of communication.
- Using Windows to fuel cloud business and Microsoft 365 strategy, and to develop new categories of devices on the intelligent edge.
- Inventing new gaming experiences that bring people together around their shared love for games on any device and pushing the boundaries of innovation with console and PC gaming by creating the next wave of entertainment.

## External Threats

- Intense competition across all markets for products and services, which may lead to lower revenue or operating margins.
- Cyberattacks and security vulnerabilities could lead to reduced revenue, increased costs, and liability claims.
- Abuse of platforms may harm reputation or user engagement.
- Legal changes, evolving business models, piracy, and other factors may decrease the value of the intellectual property.

- Government litigation and regulatory activity relating to competition rules may limit the design and market of products.

# Financial Statement Basics

The US GAAP Accounting Standard is employed by Microsoft as the accounting standard and includes non-GAAP measures in its annual report. Deloitte & Touche LLP is the auditor, June 30th, 2020 is the recent fiscal year-end. The market capitalization at the most recent year-end is $1.55 trillion since the weighted average shares outstanding are $7,610 million shares with a stock close price of $203.51. Book value (total equity) is $0.12 trillion. Microsoft is a potential company growing at a rapid speed and attractive to investors.

# Common Size Financial Statement Analysis

## Income Statement Analysis

For the level and trend for revenues, for 2017, 2018, 2019, and 2020, they have $96,571 million, $110,360 million, $125,843 million, and $143,015 million. The growth rate for 2017 to 2018 is approximately 14.28%. For 2018 to 2019, it is about 14.03%. For 2019 to 2020, it is about 13.65%. On average, the growth rate is about 13.99% over the past four years. This is a very good sign showing the growth of Microsoft.

The major expense is cost of revenue, research and development as well as the sales and marketing. Cost of revenue is explained in the time series section, here we would use the research and development as an example of explaining the major cost.

**Research and Development**

According to Microsoft's 10-K, they explained the decreased cost from 13.50% in 2017 to 13.47% in 2020. The effects from catastrophic events or political conditions' problems changed their business's research and development. They indicated the catastrophic events have majorly impacted their main location, including Silicon Valley and Seattle.

There are no unusual items, but since 2018, Microsoft has discontinued restructuring costs. Microsoft did not separately allocate the restructuring cost starting 2018. Instead, they have included these costs inside the impairment and restructuring expense. There is no large magnitude that stands out in the income statement as well.

**<u>Time Series Analysis</u>**

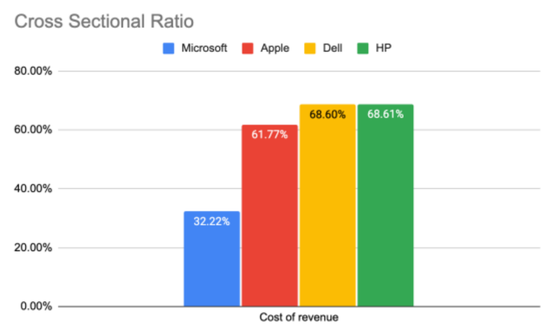
**Cost of Revenue**

This is the largest major change in terms of decreasing for the Income Statement. It is from 35.48% to 32.22%, which approximately 3.26% decrease over the past four year. The average decreasing rate is around 1.0867% per year. This indicates the cost of revenue for Microsoft is decreasing over years. According to 10-K for Microsoft, they have implemented a vertically-integrated model that allows Microsoft's cost of revenue to increase and at the same time reduced their operating margins. The common size ratio is decreasing over years in response to the revenue. This is a good sign that Microsoft has used less costs to operate higher amounts of revenue.

**Operating Income**
This section of the Income statement has a decrease rate of 6.97 from 2017 to 2020. It is a decreasing trend at the same time, the averaging decreasing rate is approximately 2.3233% per year. This is not a good sign for Microsoft's financial performance. It indicates that the company there is less profit gained from operating. The cost of operating and the operating income did not really offset each other. It is a sign that should be noted when considering investment. According to Mircrosoft's 10-K, they are *"increasing focus on cloud-based services presents execution and competitive risks".* This explains their increasing operating spending in the new area's investment. Still, this section's performance should be noted.

## Cross-Sectional Analysis

**Cost of Revenue**
In all four companies, the cost of revenues shown to be the largest portion of the expense spending. It is one of the patterns that emerge. This is the largest major difference between these competitors in common size cross-sectional income statements. Microsoft consists of 32.2% cost of revenues, which is significantly lower than other three competitors. This indicates the cost of revenue for Microsoft has comparative advantages over years, having more bargaining power of suppliers.




**Research and Development Expense**
Research and development expense is another main difference between these competitors in common size cross-sectional income statements. Microsoft consists of 13.47%, which is almost double than other three competitors. In 2020, Research and development expenses increased $2.4 billion or 14%, mainly driven by investments in cloud engineering, LinkedIn, Devices, and Gaming.This indicates the cost of revenue for Microsoft has put more focus on technology innovation over years, having a greater role of maintaining its business.

| | Microsoft | Apple | Dell | HP |
|---|---|---|---|---|
| Research and development expense | 13.47% | 6.83% | 5.42% | 6.95% |

**Sales, marketing & General Administrative Expenses**
Sales, marketing and general administrative expenses are in. Apple displays the best performance among three competitors in spending on marketing, advertising, and selling. In terms of industry average, Microsoft exhibits the average performance of around 17% in sales, marketing and general administrative expenses.

| | Microsoft | Apple | Dell | HP |
|---|---|---|---|---|
| Sales, marketing,<br>General and administrative expenses | 17.28% | 7.25% | 23.13% | 17.14% |

## Balance Sheet Analysis

Microsoft's largest assets are properties and equipment, account receivables and goodwills.

| Total liabilities/ Total assets | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|
| | 60.7% | 64.3% | 68.0% | 65.0% |

In 2020 total assets financed by non-owners was 60.7%. In 2019 total assets financed by non-owners was 64.3%. In 2018 total assets financed by non-owners was 68.0%. In 2017 total assets financed by non-owners was 65%.

| Total equity/Total assets | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|
| | 39.3% | 35.7% | 32.0% | 35% |

In 2020 total assets financed by owners was 39.3%. In 2019 total assets financed by owners was 35.7%. In 2018 total assets financed by owners was 32.0%. In 2017 total assets financed by non-owners was 35%.

## Time Series Analysis

### Property and Equipment

This is the major increase on the Balance Sheet. The highest increase from 2017 to 2020 is a 5.17% growth. There is a consistent increase from 2017's 9.48% to 2018's 11.38% with a 1.9% growth rate. From 2018 to 2019, the growth rate is approximately 1.35%. Lastly, from 2019 to 2020 is about 1.92%. The average growth rate over the past four years is 1.7233%. There is a growing holding in the land, buildings, leasehold, computer equipment and furniture and equipment. The major increase is for buildings and computer equipment. It symbolized the spending of an increase in the future's physical area's development through an increase of holding assets in buildings. This is hard to determine whether it is a good sign or not, but it is one thing that needs to be noted on their decision on holding anything over years. It is a possible factor to note for their future direction internally or externally.

NOTE 7 — PROPERTY AND EQUIPMENT

The components of property and equipment were as follows:

**(In millions)**

| June 30, | 2020 | 2019 |
|---|---|---|
| Land | $ 1,823 | $ 1,540 |
| Buildings and improvements | 33,995 | 26,288 |
| Leasehold improvements | 5,487 | 5,316 |
| Computer equipment and software | 41,261 | 33,823 |
| Furniture and equipment | 4,782 | 4,840 |
| Total, at cost | 87,348 | 71,807 |
| Accumulated depreciation | (43,197) | (35,330) |
| Total, net | $ 44,151 | $ 36,477 |

### Long Term Debt

This is the major decrease on the Balance Sheet. Same as the major increase. The decrease rate from 2017 to 2018, 2018 to 2019, 2019 to 2020 is 2.48%, 4.65%, 3.49%. The average decreasing rate is about 3.54% each year. The long term debt generally includes bonds, and long term loans. This is a good sign for Microsoft indicating their flexibility in the operation of the company overall. It is beneficial to their future management in the long run with this decreasing adjustment.

## Cross Sectional Analysis

**Inventories**

Compared with competitors, Microsoft has the least inventories that are proportional to total assets. Relatively low inventory leads to low DIO because of high inventory turnover, which indicates that Microsoft is able to more quickly turn its inventory into sales. A low percentage is a sign of high demand which points to a high level of profitability. And the smaller the amount of inventory means Microsoft's inventory is more efficient than competitors.

**Total Stockholders' Equity**

Within all four competitors, Microsoft has the highest stockholders equity percentage that is proportional to total assets, which means that Microsoft can generate more retained earnings and help the company to balance its debts and losses. Furthermore, a higher total stockholder equity indicates that Microsoft can provide more flexibility and can better recover its debts and losses.

# Revenue Analysis

## Revenue Sources

Microsoft generates revenue by offering a wide range of cloud-based and other services to people and businesses; licensing and supporting an array of software products; designing, manufacturing, and selling devices; and delivering relevant online advertising to a global audience.

## Main Business Segments

- Productivity and Business Processes
  - **Office Commercial:** Office 365 subscriptions, Office 365 portion of Microsoft 365 Commercial subscriptions, Office Licensed on-premises, comprising Office, Exchange, SharePoint, Microsoft Teams, Office 365 Security and Compliance, and Skype for Business, client Access Licenses (CALs)
  - **LinkedIn**: Talent Solutions, Learning Solutions, Marketing Solutions, Sales Solutions, and Premium Subscriptions.
  - **Dynamics business solutions**: Dynamics 365, comprising a set of intelligent, cloud-based applications across ERP, CRM, and Customer Data Platform; low-code application platform and automation solutions; and on-premises ERP and CRM applications.
- Intelligent Cloud
  - Server products and cloud services: Azure; SQL Server, Windows Server, Visual Studio, System Center, and related CALs; and GitHub.
  - Enterprise Services: Premier Support Services and Microsoft Consulting Services.
- More Personal Computing.
  - **Windows**: Windows OEM licensing and other non-volume licensing of the Windows operating system; Windows Commercial, comprising volume licensing of the Windows operating system, Windows cloud services, and other Windows

commercial offerings; patent licensing; Windows Internet of Things; and MSN advertising.
- **Devices**: Surface and PC accessories.
- **Gaming**: Xbox hardware and Xbox content and services, comprising Xbox Live (transactions, Xbox Game Pass and other subscriptions, cloud services, and advertising), video games, and third-party video game royalties.
- **Search advertising**

## Revenue Recognition

**Microsoft**

Microsoft's contracts with customers often include promises to transfer multiple products and services to a customer. It records revenues by determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment and determining stand-alone selling price ("SSP") to calculate. A right of return and other credits or incentives are accounted for as variable consideration when determining the amount of revenue to recognize.

**Apple**

The Company has identified up to three performance obligations regularly included in arrangements involving the sale of iPhone, Mac, iPad and certain other products. Because the Company lacks observable prices for the undelivered performance obligations, the allocation of revenue is based on the Company's estimated SSPs.

**Dell**

Dell provides combinations of the products and services that allows them to hold a market share in both hardware and software sectors of the industry. They classify hardware, perpetual software licenses and SaaS as distinct performance obligations. For software, they follow the principal and costs of goods sold on a gross basis. The major portion of their revenue comes from sales of product, product support and maintenance. Highly involving the various marketing strategies in cooperative marking, price protection and volume based discounts and other incentive programs.

**HP**

HP enters into contracts with customers that may include combinations of products and services, resulting in arrangements containing multiple performance obligations for hardware and software products and/or various services. In transactions where HP delivers hardware or software, HP are typically the principal and record revenue and costs of goods sold on a gross basis. HP's hardware and perpetual software licenses are distinct performance obligations where revenue is recognized upfront upon transfer of control. Term software licenses include multiple performance obligations where the term licenses are recognized upfront upon transfer of control, with the associated software maintenance revenue recognized ratably over the contract term as services and software updates are provided.

Source (10-K): https://www.sec.gov/edgar/searchedgar/companysearch.html

# Ratio Indicator Analysis

## Profitability ratios

Measure financial performance.

- **Return on Equity**
  Return on equity reflects both company performance (as measured by ROA) and how assets are financed (as measured by Financial Leverage). ROE measures the ability of a company to generate profits from the stockholders' investments. ROE between 15%-20% is considered good. The higher the percentage, usually the better, as it shows that the company is doing a good job using the investors' money.
- **Return on Assets**
  ROA indicates your business's ability to generate profits. The return on assets is higher, which means the company is earning more money on the lesser investment.

## Turnover Ratios

Measure efficiency of asset use and help determine whether operating efficiency is improving or declining.

- **A/R Turnover**
  Measures how fast the company can collect A/R to support sales. The higher the ratio means that the company collects A/R faster.
- **Inventory Turnover**
  Reflects the number of times inventory is sold or used during the period.
- **A/P Turnover**
  Reflects how many times a company pays off its suppliers during the period. The higher the ratio means that the company pays A/P faster.

## Coverage Ratios

Indicate a company's ability to generate additional cash to cover principal and interest payments when due.

- **Cash From Operations to Total Debt**
  Measures the ability to generate additional cash to cover debt payments as they come due. The higher the ratio, the greater the chance the company will be able to service its debt. But the ratio cannot be too high or too low.
- **Free Operating Cash Flow to Total Debt**
  Considers excess operating cash flow after cash is spent on capital expenditures. The higher the ratio means that the company is more likely to pay off its loans.
- **Times Interest Earned Ratio**
  Reflects the operating income available to pay interest expense, and assumes only interest must be paid because the principal will be refinanced. The result shows how many times the company can cover its interest expense.
- **EBITDA Coverage Ratio**
  Measures a company's ability to pay interest out of current profits. The higher the ratio, the better the chance the company can get approved for financing.

### Liquidity Ratios

Indicate cash availability-how much cash a company has, and how much it can generate on short notice.

- **Current Ratio**
  Measures a company's ability to pay short-term obligations or those due within one year. The higher the better.
- **Quick Ratio**
  Reflects on a company's ability to meet its current liabilities without liquidating inventories. The higher the better.

### Solvency Ratios

Indicate a company's ability to meet its debt obligations.

- **Liabilities-to-Equity Ratio**
  Indicates how reliant a company is on creditor financing compared with equity financing. Relatively lower ratios are preferable.
- **Total Debt-to-Equity Ratio**
  Distinguishes between operating creditors and debt obligations.Higher ratios are preferable.

### Altman's Z-score

Used to predict bankruptcy risk.

- If **Z-score > 3.00**, it means that the company is healthy and there's low bankruptcy potential in the short term.
- If **2.99> Z-score > 1.80**, it means that the company is exposed to some risk of bankruptcy.
- f **1.80> Z-score**, it means that the company is in financial distress and there's high bankruptcy risk in the short term.
- Microsoft's **Z-score is 5.21>3.00**, so Microsoft is healthy and has a low risk of bankruptcy.

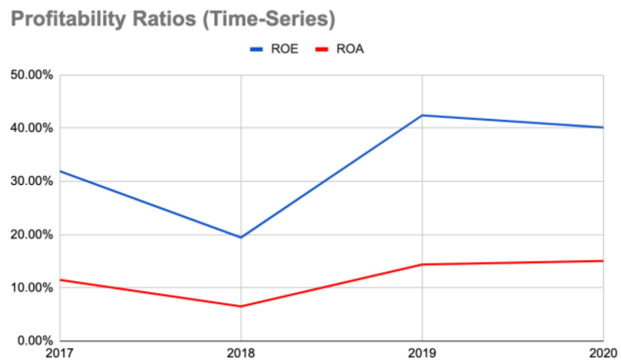
## Profitability Analysis

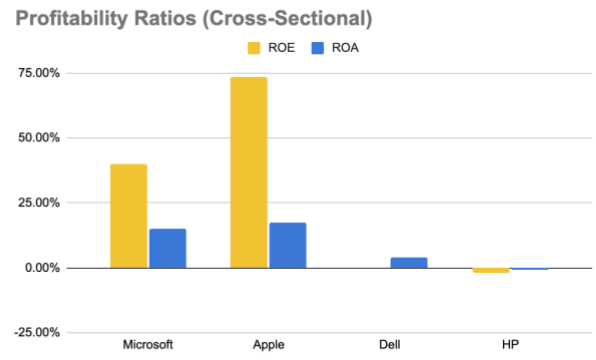
### Return on Equity

ROE decreases from 2017 to 2018, increases from 2018 to 2019, and then decreases slightly from 2018 to 2019. The ROE ratio of Microsoft is high, which means it is doing a good job to generate profits from the stockholders' investments. Compared with competitors, Apple has the highest ROE ratio, which means Apple is better at utilizing company equity to generate profits.

### Return on Assets

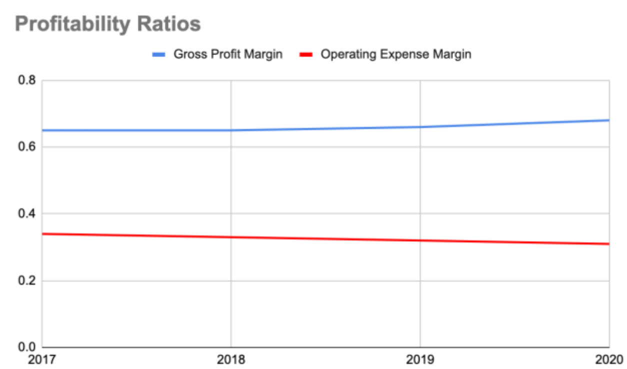
ROA decreases from 2017 to 2018, and then increases from 2018 to 2020,which is due to the increase in both PM and AT. An increasing ROA indicates that the company's management is efficient and productive to use its assets to generate earnings. Compared with competitors, Apple has the highest ROA ratio, which means Apple is effectively using its assets to create more profits.




## Gross Profit Margin

Gross profit margin is high and increasing a little bit, which reflects a high efficiency of operations of Microsoft and it is good at turning sales into profits. It means Microsoft can cover the cost of sales and provide for profits. On the other hand, a high profit margin signals less competition or high demand for the company's products.




## Operating Expense Margin

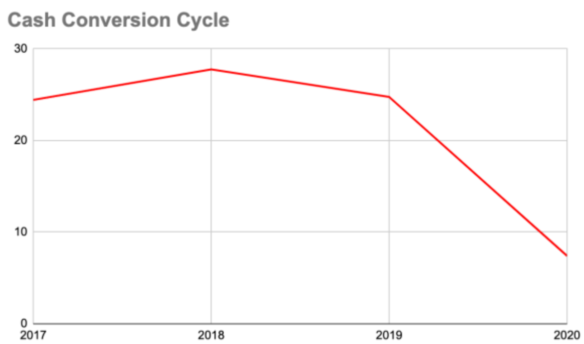
Operating expense margin measures general operating costs for each sales dollar. It is decreasing a little bit, which means the decrease of operating costs relative to sales. The lower the company's operating costs are, the more profitable the company can be.

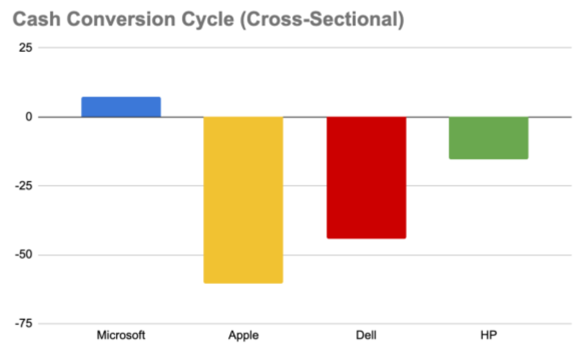
## Cash Conversion Cycle

The cash conversion cycle increases slightly from 2017 to 2018, decreases slightly from 2018 to 2019, and then decreases dramatically from 2019 to 2020. The company's CCC is not viewed positively from 2017 to 2019. Its CCC is a positive number, which suggests that Microsoft's operating cycle is relatively slow in generating profits and cash flow, and needs working capital financing from other sources. But the company's CCC is low in 2020, which means the operating cycle is generating profits and cash flow quickly. The productivity is good in 2020. Compared with competitors, Microsoft has a positive and the highest CCC. Competitors all have the negative CCC, which means competitors have greater liquidity than Microsoft and they are able to borrow from their suppliers that are interest-free to finance their operations.

# Risk Analysis

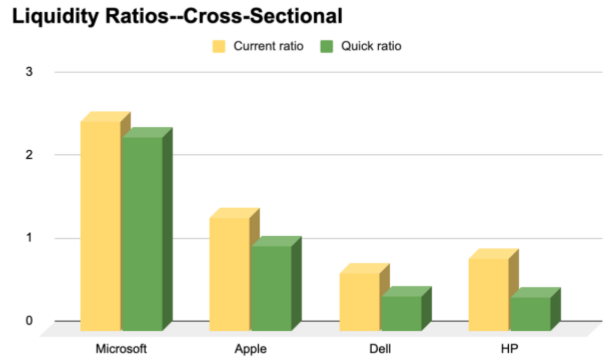
## Liquidity Ratios

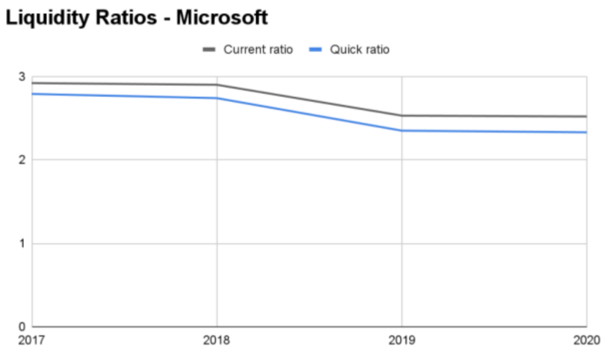



The firm's liquidity has become worse from
2017 to 2020 because: (1) decrease in current ratio; (2) decrease in quick ratio. Both ratios demonstrate a decreasing trend over 4 years, which indicates that risk in the short term increases. However, since both ratios are above 1, the default risk of Microsoft is still considered low.

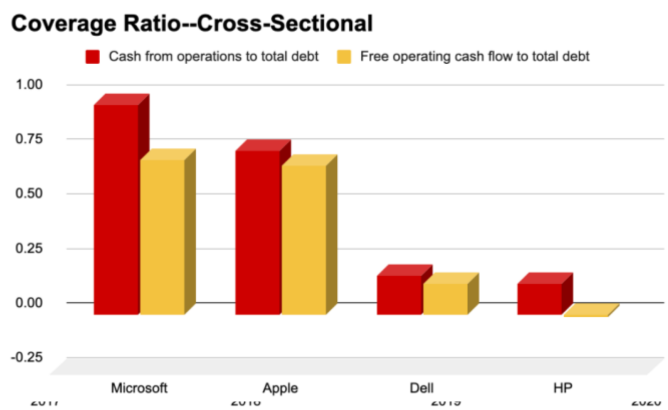
Compared to the competitors, Microsoft holds the highest liquidity ratios, which indicates that Microsoft has good financial health and is not likely to face financial crisis in both short and long term.






## Coverage Ratios

**Cash from Operations to Total Debt**: A high ratio indicates the company likely has a lower probability of defaulting on its loans and has the ability to repay the debt. Cash from operations to total debt of Microsoft is less than 1, which indicates that Microsoft isn't generating sufficient cash flow to meet its debt obligations and needs more capital. However, the ratio from 2017 to 2020 shows an increasing trend and is getting closer to 1, which indicates that the ability of Microsoft to generate additional cash to cover debt payments as they come due improved.



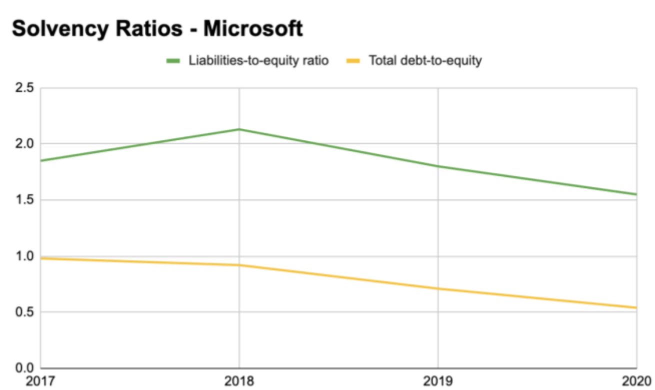

**Free Operating Cash Flow to Total Debt**: Free operating cash flow to total debt considers excess operating cash flow after cash is spent on capital expenditures. Over the 4 years, free operating cash flow to total debt increases, which means the company has a better ability to repay debt from the cash flows remaining after CAPEX.

Over the 4 years, both ratios demonstrated an increasing trend. The higher the ratios, the better the chances that the company is able to cover principal and interest payments, so Microsoft has a low credit risk both in short term and long term based on coverage ratios.

Compared to other companies, Microsoft has the highest coverage ratio, which conveys that Microsoft has a better ability to generate additional cash to cover its debts than other competitors.

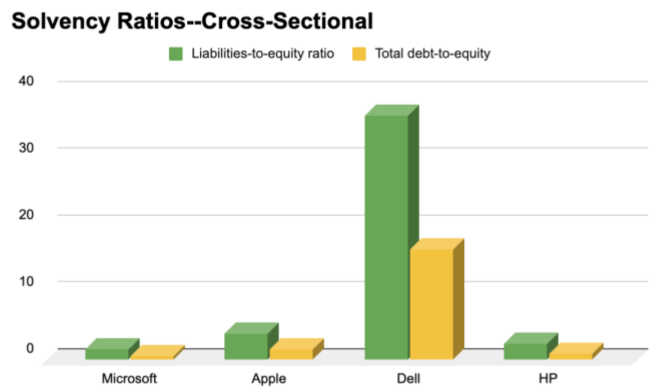
## Solvency Ratios

**Total Debt-to-Equity**: The debt-to-equity ratio indicates the relative proportion of shareholders' equity and debt used to finance a company's assets. Over the 4 years, the total debt-to-equity ratio of Microsoft decreases and is always less than 1.0, which means that the company is getting less of its financing by borrowing money, which subjects the company to potential risk if debt levels are low. A less



than 1 ratio indicates that the portion of assets provided by stockholders is greater than the portion of assets provided by creditors. The debt to equity ratio is less than 1.0, then the firm is generally less risky than firms whose debt to equity ratio is greater than 1.0.

**The Liabilities-to-Equity Ratio**: The ratio conveys how reliant a company is on creditor financing compared with equity financing. A higher ratio indicates a less solvent company. Over the 4 years, the liabilities-to-equity ratio of Microsoft is always larger than 1, and in 2018, the ratio is even greater than 2, which indicates that Microsoft has a greater solvency risk because it is more likely to default on the repayment of its liabilities. This is not good for investors because it increases the risk associated with their investment. But after 2018, the ratio decreased, so the solvency and credit risk of Microsoft decreased.




Based on the solvency ratios, they both convey decreasing trends, which means that the solvency risk and credit risk decreases. Further, these demonstrate that Microsoft has a low credit risk in both short term and long term.

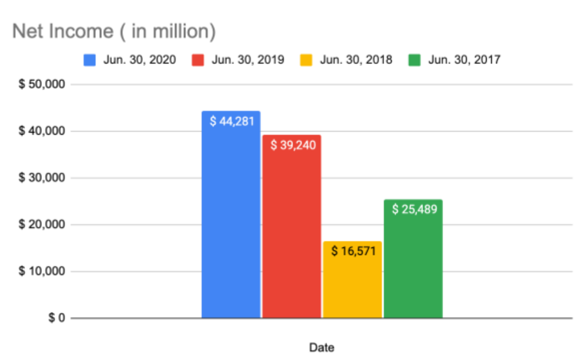
Compared to other competitors, Microsoft holds the lowest solvency ratio, which means it has a better ability to meet its debt obligations.

In general, based on the time series analysis and cross-sectional analysis of liquidity ratios, coverage ratios, and solvency ratios, Microsoft has a low credit risk in both short and long term.

# Statement of Cash Flow Analysis

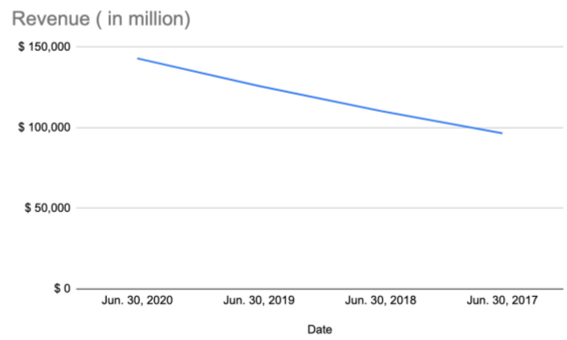
## Net Income/Revenue Analysis

For Earnings, which refers to Net Income, from 2017 to 2020, Microsoft faced an increasing trend with a small decrease in 2018. From 2017 to 2018, there is a decrease of $8,918 million, this is due to the **Tax Cuts and Jobs Act of 2017 (TCJA)**. According to Microsoft 10-K, they reported: *"Current year net income and diluted EPS were negatively impacted by the net charge related to TCJA, which resulted in a decrease to net income and diluted earnings per share of $13.7 billion and $1.75, respectively."* After the year being affected by the TCJA, Microsoft's net income has increased constantly since then.



This growth indicates Microsoft has an excellent performance in the market that allows them to have grown over years.

For Sales, it refers to Revenue in reporting. From 2017 to 2020, there will be growth over these years. Their revenue comes from Productivity and Business Processes, Office Commercial, Office Consumer, LinkedIn, Dynamics, Intelligent Cloud, Server Products and Cloud Services, Enterprise Services, More Personal Computing, Devices, Gaming and Search, etc. This consistent growth shows that there is an increase in sales from the beginning period to the ending period each year. It illustrates a growth sign that has been practiced by Microsoft over these years.

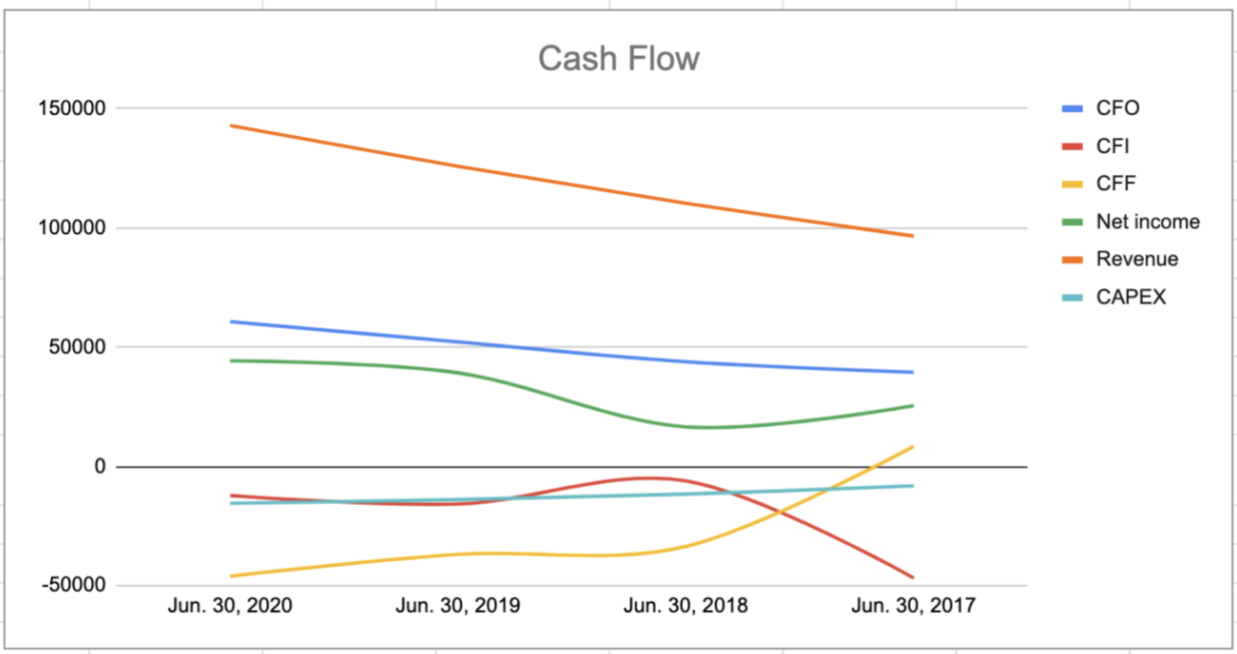



## Statement of Cash Flow

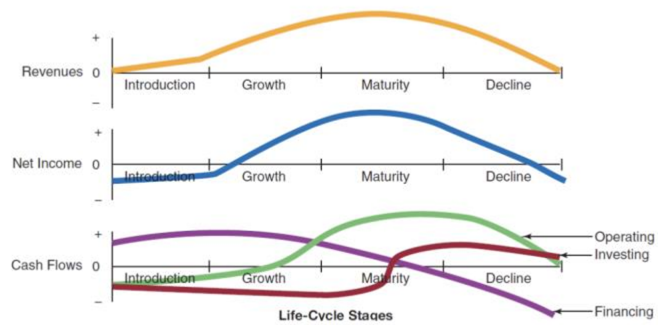
A Statement of Cash Flow is used to measure how a company manages the cash, including their inflows and outflows over a year. It is also used to measure how companies use the cash in the company. It includes three main sections in the Statement of Cash Flow:

- Cash from Operating Activities (CFO)
- Cash from Investing Activities (CFI)
- Cash from Financing Activities (CFF)

Below is Microsoft's CFO, CFI, CFF, Net Income, and Revenue's illustration for 2017 to 2020. It provides a good graphical representation of their financial operation.




Quick overview of all trends in these three activities. The CFO is increasing from 2017 to 2020. CFI is increasing in the beginning and then there is a constant change over years. CFF is increasing from 2017 to 2020. Both revenue and net income show a good sign with an increasing trend. The CAPEX[1] expense is also constant through the years.




Microsoft is mature and growing consistently according to the life cycle stages diagram. The company has a great reputation and a well-established brand name. Also, the company has a solid customer base that promotes operating the cash flow. The CFO is the primary source of the cash flow and provides sufficient cash to the company's financial activities. The negative CFO and CFF indicate the company has a good ability to invest and repay debt. Besides, the revenue and net income show an increasing trend that reaches the peak. All those factors indicate that Microsoft is in a solid and mature stage.

## Cash from Operating Activities

The CFO for Microsoft is increasing and positive. This shows Microsoft is a healthy mature firm. The ratio for CFO is high too, it indicates the earnings quality is high too.

Microsoft's working capital[2] has an increase in 2018, after then, there is a decrease until 2020. The main reason that leads to this increase in 2018, is due to the income taxes that were affected by the Tax Act. There is an increase in income tax from 2017: $1,792 million to 2018: $18,183 million.

Besides the reason for Income Taxes, another main reason it affected the operation's increase is based on Microsoft's spending on the account payable. This shows Microsoft is spending more money on purchasing services or goods through credit. It is a sign that should be noted.

For cash collected from customers = sales + decrease in A/R (- increase in A/R). There is a decreasing trend from 2017 to 2019 and slightly increased from 2019 to 2020. This is similar with the account receivable's trend over the four years.

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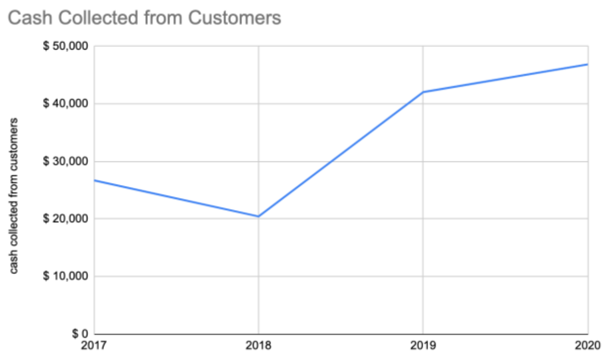
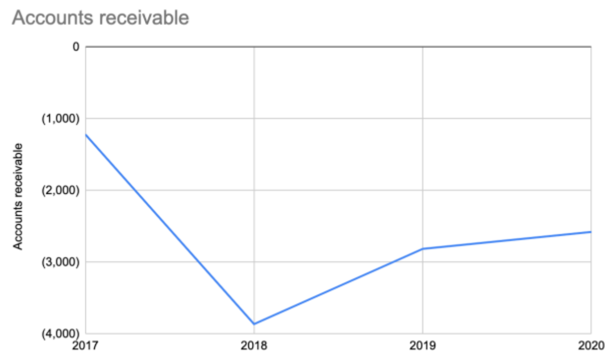
[1] **CAPEX**: Capital expenditure, it includes building, equipment, and hardware etc.
[2] **Working Capital**: Working capital is under cash flow statement, it includes current assets - current liabilities.



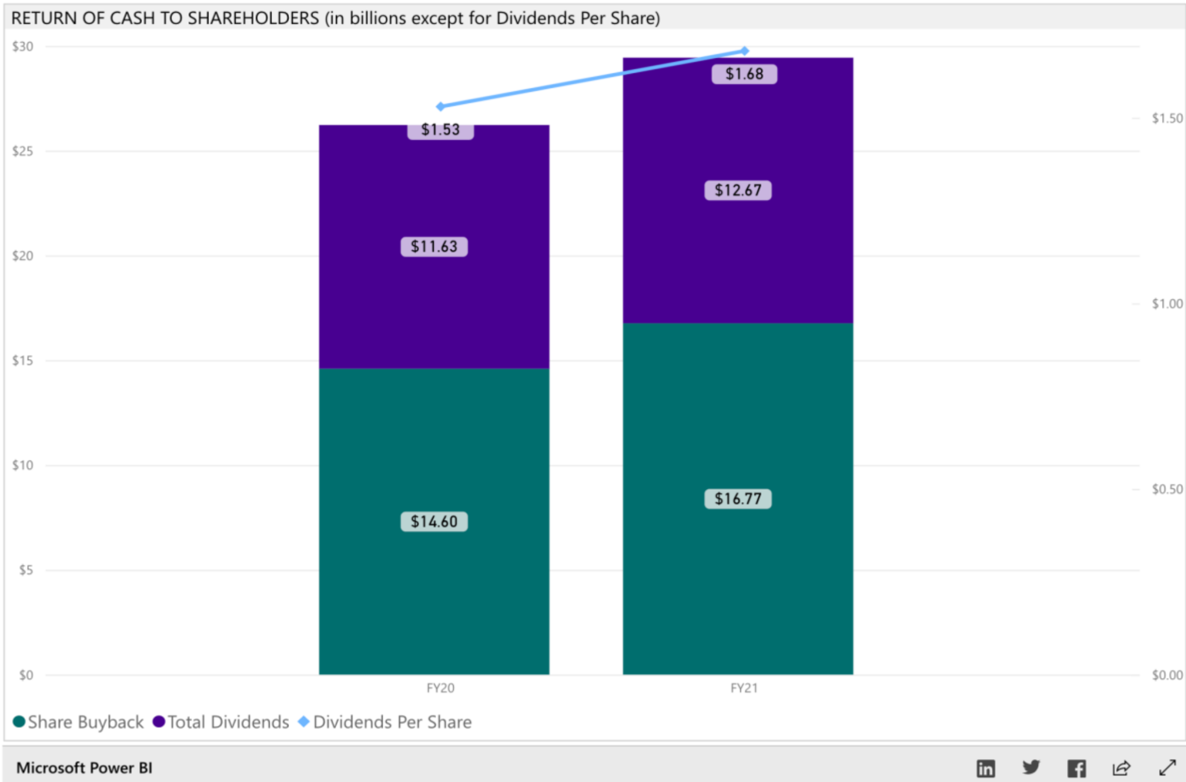

## Cash From Investing Activities

CFI is negative shows Microsoft is a growing firm. It benefits from both internal and external growth that Microsoft invests in capital expenditures (PP&E) and acquisition of companies, net of cash acquired, and purchases of intangible and other assets. It is a good sign that Microsoft invests cash in PP&E to generate future profit and enlarge the company. There is internal growth and external growth together shows Microsoft has performed well on both sides' investment management. According to Microsoft's 10K, they indicated there would be increased investment spending in many aspects of the product and operation, including new facilities, data centers, and computer systems for research and development, sales and marketing, support, and administrative staff.

## Cash From Financing Activities

According to Crunchbase, Microsoft has done 153 investments and led 60 investments. Microsoft has had 39 exits. Microsoft's most notable exits include Facebook, Apple, and DocuSign. Apple and Facebook have been previously founded and supported by Microsoft financially. Microsoft invested and later existed in those companies, which shows that Microsoft has a great investment sense all over these years. It is a shred of good side evidence showing their performance in investment.


In 2017 the CFF is positive. From 2018 to 2020, CFF is negative and shows an increasing trend. There are several external financing activities like repayments of debt, common stock issued, and common stock repurchased. The dividends paid are also increasing, from $11845 million in 2018 to $15137 million in 2020. The cash outflow shows a positive sign since Microsoft can repay debt, pay dividends to shareholders. Also, the negative CFF implies that Microsoft is in a steady stage since it doesn't need additional support from operating and investing activities.




According to Microsoft Investor Relationship analysis of their Return of cash to shareholders. For the past two years, their share buyback increased from $14.60 billion to $16.77 billion. The total dividends also increased from $11.63 billion to $12.67 billion. All of these show a good sign of paying back and indicating Microsoft is a great and healthy company to invest in based on the number they return to their shareholders.

## Time Series Analysis

This analyzes Microsoft's company's historical data from 2017 to 2020. To present an analysis on learning the company's financial performance vertically.

More in detail, over the 4 years, there have been many factors affecting Microsoft's cash flow statement. Here we mentioned four possible factors that influenced Microsoft's performance:

- **Taxes**: There has been a large impact through the tax. It increased Microsoft's liabilities that led to higher tax liability in 2018 when the Tax Cuts and Jobs Act was implemented. There is a change in the effective rate for the fiscal year after 2018 which is approximately 55% to 10% in 2019. This is due to the tax benefits associated with intangible assets transfers that earn a lower tax rate through operating more outside the U.S.
- **Purchase of Investment**: Microsoft spends an increasing amount of money in the purchase of investment in products and services. They continue to spend money on continuing investment and marketing. In addition, they spend money on hardware, etc. The spending in research and investment requires a few years to see profits. They noted the new product is less likely to have a good profit, or even make profits. This new product investment could affect Microsoft's profits short termly, but benefiting Microsoft long termly. It is a good sign of spending money on an investment that brings profits later in the long run.

- **Acquisitions, Joint Ventures, Strategic Alliances**: In 2018, Microsoft acquired Github[3] 7.5 million. This brings negative effects to Microsoft's performance due to the adjustment from both companies. It caused difficulties in people, product and business overall. Spending on acquisitions, joint ventures, and strategic alliances needs a few years' adjustments. This is a negative sign for Microsoft, there is a problem with their new investment in the management team.
- **Debt**: This increases debt and unearned revenue. Microsoft used the insurance of the debt to benefit their credits and benefit the liquidity of the company. In their 2020s 10K, they stated, *"In June 2020, we exchanged a portion of our existing debt at premium for cash and new debt with longer maturities to take advantage of favorable financing rates in the debt markets, reflecting our credit rating and the low-interest-rate environment".* It shows Microsoft could be considered risky since they use debt to stay up to their liquidity.

## Cross-Sectional Analysis

To compare the performance of different companies, we use Microsoft as the main company and other companies to contrast. Cross Section provided a horizontal view of the company's performances.

From the cross-sectional comparison Cash flow statement analysis, we can see in 2020:

| Microsoft | | | |
|---|---|---|---|
| CFO: Positive | CFO: Positive | CFO: Positive | CFO: Positive |
| CFI: Negative | CFI: Negative | CFI: Negative | CFI: Positive |
| CFF: Negative | CFF: Negative | CFF: Negative | CFF: Negative |
| Net Income: Positive | Net Income: Positive | Net Income: Negative | Net Income: Negative |

Between all four companies in a similar industry, here we focused on four competitors with Microsoft. It includes Apple, Dell, and HP.

Microsoft's detailed analysis for CFO, CFI, and CFF is reported in the above section. Apple, they have the same trend as Microsoft. It implies Apple has a similar trend in terms of cash flow. This indicates Apple is a mature strong competitor to Microsoft in the market. Besides, Dell has a great performance in cash flow but there is a sign of decreasing net income. This shows Dell is facing a declining stage. Lastly, HP is performing negatively in most of the cash flow. There is negative performance in net income and investment. This shows that the company has a good sign to invest in comparison with all other competitors in the market.

Several crucial line items show the differences between those four companies. Below are two specific line items explained in detail explaining Microsoft's performances.

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[3] **GitHub**: Millions of developers and companies build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world. (According to GitHub's Website)

**Acquisitions of Companies**
The acquisitions show a company's strategy in their future short-term or long-term development, and also financial expense cash flow spending.

**Microsoft** has made 10 acquisitions of companies in the fiscal year 2020.
- June 29, 2019: **BlueTalon** - Data Privacy and Governance Services
- August 5, 2019: **PromoteIQ** - Retail E-Commerce Improvement
- August 19, 2019: **jClarity** - Java software optimization
- September 5, 2019: **Movere** - Cloud Migration
- October 21, 2019: **Mover** - File Migration
- March 26, 2020: **Affirmed Networks** - 5G Networking
- May 14, 2020: **Metaswitch Networks** - 5G Networking
- May 19, 2020: **Softomotive** - Robotic Process Automation
- June 18, 2020: **ADRM Software** - Data Modeling Startup
- June 22, 2020: **CyberX** - IoT/OT Security

All the acquisition spending goes to the cloud and 5G. The most notable acquisition is Microsoft did two acquisitions for 5G networking company, Affirmed Networks and Metaswitch Networks in correspondence to the trending in 5G. In the global market, China has officially started 5G networking in early 2019. The growth of the market has opened, Microsoft also started their focus in this newly opened area. Besides 5G, they also focused on the data center and cloud-based section of the company's future growth.

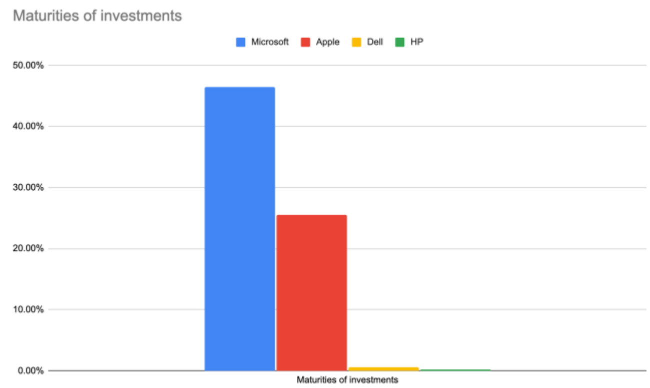
**Apple** has made 11 acquisitions of companies during their fiscal year of 2020.
- October 3, 2019: **IKinema** - Motion Capture
- December 12, 2019: **Spectral Edge** - Low-Light Photography
- January 15, 2020: **Xnor.ai** - Edge Computing
- Early 2020: **Scout FM** - Podcast A.I.
- March 31, 2020: **Dark Sky** - Weather Forecasting and App
- April 3, 2020: **Voysis** - Artificial Intelligence/Voice Assistant
- May 14, 2020: **NextVR** - Virtual Reality Events
- June 24, 2020: **fleetsmith** - Mobile Device Management
- July 31, 2020: **Mobeewave** - Payments Startup
- August 20, 2020: **Camerai** - Artificial Reality
- August 25, 2020: **Spaces** - Virtual Reality Startup

Those acquisitions are mostly related to VR, AR and the majority of them are related to cell phone development, including broadcasting, motion, and weather. The focus of Apple's acquisition is different from Microsoft. This is based on the fact they would have a different approach to the company's development. They are considered competitors in some markets, but possibly in the future could have a distinct focus with different companies' objective focus.

**Dell** has not acquired it from 2017 to 2020. The latest acquisition was done on October 12th, 2015. The company is EMC, working on Storage, Virtualization, Services, Cloud, Data Center, Security, and Compliances. Also, **HP**, they have made no acquisitions for 2020, the last acquisition is for 2017. There are two companies, one is cloud management called Cloud Cruiser, and another one is called SimpliVity working on hyper-converged infrastructure. Dell and HP show that they have not yet managed to expand their services these years.

**Maturities of Investments**

The maturities of investment are associated with the acquisitions as well. The maturity is showing the payback from their investments. Microsoft's maturities of investment are around 46.46% of Microsoft's revenue. Apple's maturities of investment are around 25.47%, Dell's is about 0.54% and HP's is about 0.18%. This is a good sign for Microsoft to have a high return from an investment compared to all other competitors. It is approximately 50% more return from an investment compared to Apple.

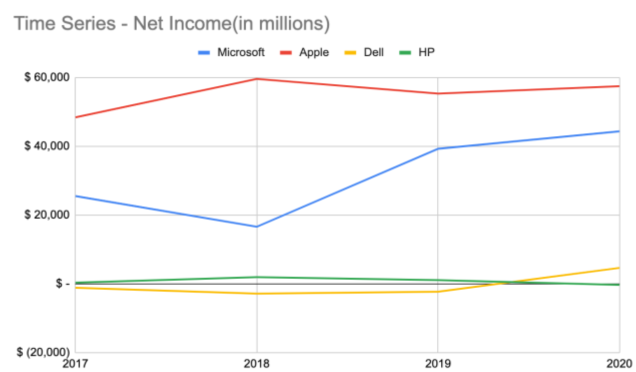



## 4 Year Cross-Sectional Analysis

For this section, we chose some other variables to analyze besides what was mentioned in the 1-year cross-sectional horizontal analysis section.

**Net Income**

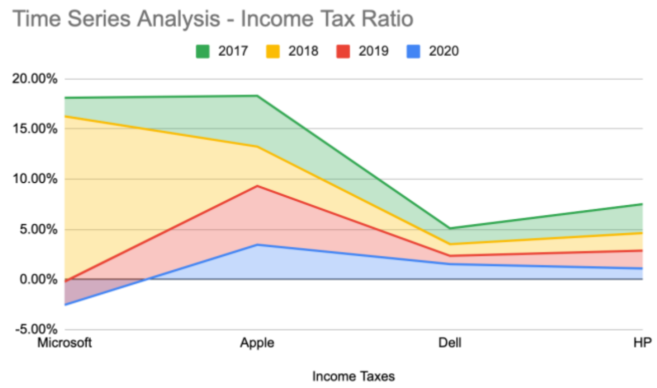
The graph represents Microsoft and all of the competitors in this case analysis. Microsoft and Apple have shown a good sign of net income trend with a good positive number shown on the graph. Dell and HP are facing difficulties in generating income since 2017. This shows that Microsoft has a competitive advantage on net income compared with most of the competitors.




There is a problem shown in 2018, Apple's net income is an increasing trend from 2017 to 2018. This indicates that Apple was not affected by the Tax Cut and the Jobs Act (**TCJA)**. At the same time, Microsoft experienced a decline in revenue in 2018. It indicates that Microsoft has been affected by the policy more than other firms.

**Income Tax Ratio**

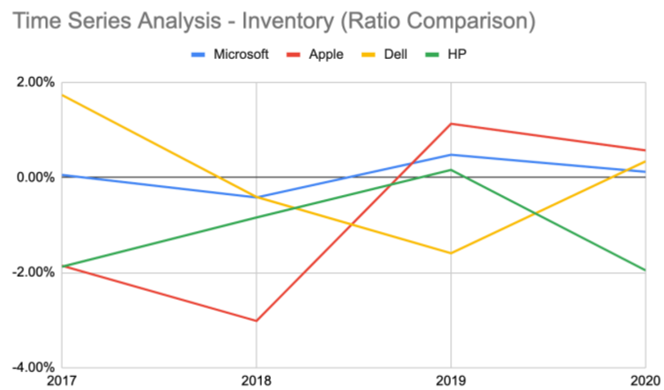
Through analysis, we found out that many aspects of Microsoft's performance in 2018 and 2019 were impacted by the Tax Act. From this ratio, we found out that Microsoft and all other four competitors, Apple, Dell, and HP's portion of the spending on Income taxes have decreased every year. There is a large gap between 2018 and 2019 indicating Microsoft has adjusted through the impact on the Tax Act. It is a good sign showing their adjustment to the new police and act.




There is not much of a competitive advantage shown through this graph since all three competitors have a good sign of reacting to their income taxes.

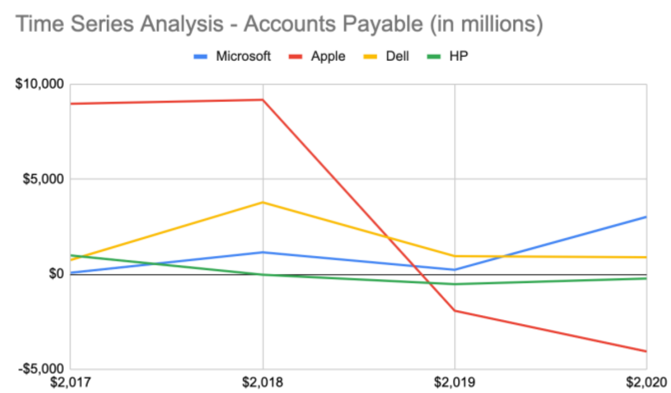
**Inventory**

In this time-series cross-sectional analysis, using the ratio to compare to support analysis on all four companies' inventory expense ratio. Microsoft has consistent inventory spending compared to all other three competitors. It shows Microsoft has good management in their operating assets expense. This is a good sign compared to all other competitors.




**Account Payable**

This is the amount of money that companies owe to other firms or customers. Microsoft shows a good sign on managing their product too. Comparing this to Apple which is recognized as the main competitor in the market, Microsoft performs much better in terms of Account Payable management. The huge jumps for Apple show their inconsistency of paying their payable. This also supports that Microsoft holds a good sign of investment.




# Accounting Quality

Microsoft has an overall high accounting since the report number that Microsoft provides is relevant in that it helps investors to forecast the amount and timing of future earnings and cash flows.

## Quality Analysis

Microsoft reports GAAP earnings and at the same time, they report non-GAAP measurements to assist market understanding of their financial statements. Microsoft provides both financial statements to explain their financial situation in these years. In their Non-GAAP net income, they excluded the net tax impact of the transfer of intangible assets in the fiscal year 2019 and the net tax impact of the Tax Cut and Jobs Acts (**TCAJ**) in the fiscal year 2019 and 2018. Both of these two affect their current year's financial performance. There are no effects in 2020, but in 2019, the net tax impact of the transfer of intangible property of $2,567 million and the net tax impact of the Tax Cut and Jobs Acts (**TCJA**) of $157 million. In 2018, there is an impact of **TCJA** of $12,696 million. These adjusted numbers show Microsoft's performance over years is consistent and has a good adjustment to the market through the years.

| (In millions, except percentages and per share amounts) | | 2020 | | 2019 | | 2018 |
|---|---|---|---|---|---|---|
| Net income | $ | **44,281** | $ | 39,240 | $ | 16,571 |
| Net tax impact of transfer of intangible properties | | **0** | | (2,567) | | 0 |
| Net tax impact of the TCJA | | **0** | | 157 | | 13,696 |
| Non-GAAP net income | $ | **44,281** | $ | 36,830 | $ | 30,267 |

For four companies, Microsoft, Apple, Dell, and HP. Based on the 10K from all four of them, all four companies have been affected by the Tax Cut and Jobs Act (TCJA) that was introduced in the year 2017.

The Primary source of Microsoft income comes from its operation and it indicates the consistency of generating the profit. The four-year NI/CFO value shows the discrepancies between net income and cash flow from operations and it indicates a relatively low earning quality. Non-cash and non-operating charges are reducing the net income. In the cash flow statement, the non-cash line items that decrease the net income are account receivable and deferred income tax.

| NI/CFO | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|
| | 0.73 | 0.75 | 0.38 | 0.65 |

The net income and CFO do not change at a similar rate. Net income and CFO both measured Microsoft's underlying financial performance, however, in 2018 there is a discrepancy. The net income is decreasing but the CFO is increasing. This is mainly due to the Tax cut and Jobs Act states previously and 2018 is the year that is most influenced. After the adjustment, the net income and CFO moves in the same direction and change at a similar rate.

| | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|
| Net income | $44,281 | $39,240 | $16,571 | $25,489 |
| CFO | $60,675 | $52,185 | $43,884 | $39,507 |

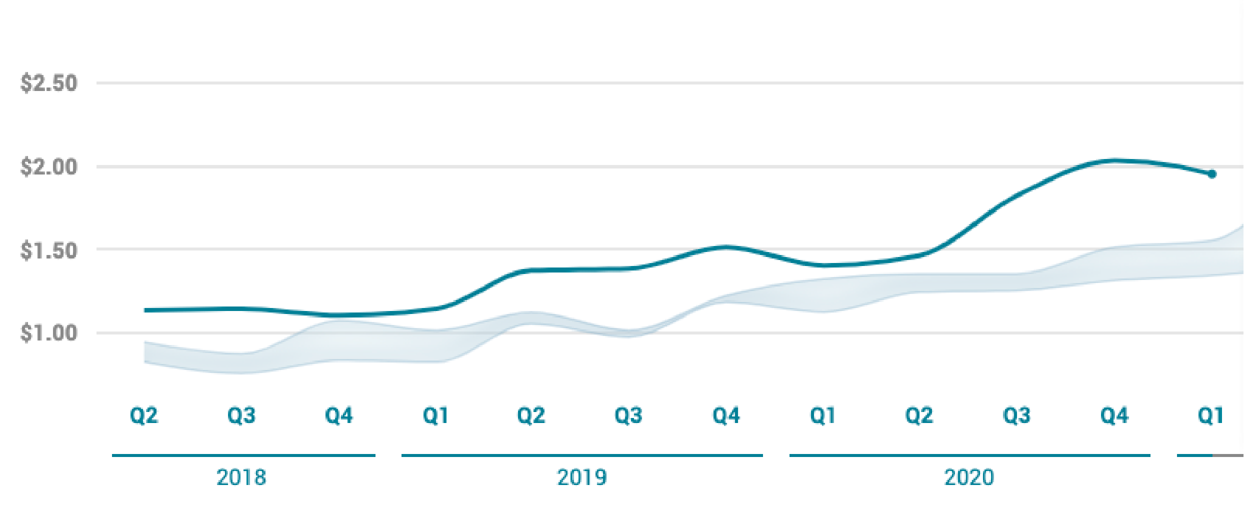
## Red Flags

In the research line box, some activities suggest that one company might misinterpret the earnings for its own benefit. The misinterpretation can make the financial reports more attractive to an investor, but it is misleading. Microsoft does not have many suspicious activities since it uses GAAP and non-GAAP combination earning reports. Several suspicious activities can influence the quality of the financial report.

In list number 6, *"too smooth of an earning progression (relative to the economy, market)"*. Although Microsoft has an increasing trend of revenue and net income that shows a smooth progression compared with other companies during the Covid-19 periods. It is not a red flag since Microsoft has established a good brand name and reputation that helps them to lay a solid customer foundation. Understandably, Microsoft as a mature company has formed an operating system that generates steady profit.

In list number 19, *"Increasing debt and high liabilities"* can be a potential risk factor. Microsoft has an increasing debt and liability from 2017 to 2020. The increase is not substantial and Microsoft has the ability to repay in the future so we need further observation to affirm this is a red flag activity.

## Earnings Per Share Analysis




From the EPS forecast in 2018 and 2020, we cannot see the trend that earnings per share just meet or beat the forecast. Although the earnings per share exceed the forecast in every quarter, the margin is large so Microsoft is not likely involved in the earning management.

# Conclusion

Overall, Microsoft holds a strong competitive advantage compared to all others competitors listed in most of their strand business. For common size analysis of Income Statement and Balance Sheet, all of them have a well-performed comparison with their historical data vertically from 2017 to 2020. At the same time, they have well performed in comparison with other listed competitors in their industry and markets. Profitability and risk have also held a high competitive advantage throughout the years of financial performance. In regards to the performance in the cash flow statement, Microsoft performed with a good sign in most of the scenarios. They have good cash flow management, indicating their good financial performance in the current stage and future expansion. Lastly, their accounting quality has some items needed to be noted. There are potential risk factors for them. As a result, the company would have a good performance overall compared to others.

## Investment Recommendation

After a careful and detailed review of Microsoft's performance vertically and horizontally. We have considered many perspectives of their financial performance. There is a high potential for growth in the future. We as group financial statement analysts would suggest a **strong buy** and hold for the potential growth in the future as well.

# Appendix

## Microsoft Common Size Ratio (I/S, B/S, CF/S)

| COMMON SIZE RATIO INCOME STATEMENTS (MICROSOFT_FOCAL) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jun. 30, 2020 | Jun. 30, 2019 | Jun. 30, 2018 | Jun. 30, 2017 |
| Revenue | 100.00% | 100.00% | 100.00% | 100.00% |
| Cost of revenue | 32.22% | 34.10% | 34.75% | 35.48% |
| Gross margin | 67.78% | 65.90% | 65.25% | 64.52% |
| Research and development | 13.47% | 13.41% | 13.34% | 13.50% |
| Sales and marketing | 13.70% | 14.47% | 15.83% | 16.01% |
| General and administrative | 3.57% | 3.88% | 4.31% | 4.64% |
| Restructuring | 0.00% | 0.00% | 0.00% | 0.32% |
| Operating income | 37.03% | 34.14% | 31.77% | 30.06% |
| Other income, net | 0.05% | 0.58% | 1.28% | 0.91% |
| Income before income taxes | 37.08% | 34.72% | 33.05% | 30.96% |
| Provision for income taxes | 6.12% | 3.53% | 18.03% | 4.57% |
| Net income | 30.96% | 31.18% | 15.02% | 26.39% |

| COMMON SIZE RATIO BALANCE SHEETS (MICROSOFT_FOCAL) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jun. 30, 2020 | Jun. 30, 2019 | Jun. 30, 2018 | Jun. 30, 2017 |
| **Current assets:** | | | | |
| Cash and cash equivalents | 4.51% | 3.96% | 4.62% | 3.06% |
| Short-term investments | 40.81% | 42.74% | 47.06% | 50.06% |
| Total cash, cash equivalents, and short-term investments | 45.31% | 46.70% | 51.68% | 53.13% |
| Accounts receivable, net of allowance for doubtful accounts of $788, $411, | 10.62% | 10.30% | 10.23% | 8.96% |
| Inventories | 0.63% | 0.72% | 1.03% | 0.87% |
| Other | 3.81% | 3.54% | 2.61% | 2.04% |
| Total current assets | 60.37% | 61.26% | 65.55% | 65.00% |
| Property and equipment, net of accumulated depreciation of $43,197, | 14.65% | 12.73% | 11.38% | 9.48% |
| Operating lease right-of-use assets | 2.90% | 2.58% | 2.58% | 2.62% |
| Equity investments | 0.98% | 0.92% | 0.72% | 2.41% |
| Goodwill | 14.39% | 14.67% | 13.79% | 14.03% |
| Intangible assets, net | 2.34% | 2.70% | 3.11% | 4.04% |
| Other long-term assets | 4.36% | 5.14% | 2.88% | 2.43% |
| Total assets | 100.00% | 100.00% | 100.00% | 100.00% |
| **Current liabilities:** | | | | |
| Accounts payable | 4.16% | 3.27% | 3.33% | 2.95% |
| Short-term debt | 0.00% | 0.00% | 0.00% | 3.62% |
| Current portion of long-term debt | 1.24% | 1.92% | 1.54% | 0.42% |
| Accrued compensation | 2.61% | 2.38% | 2.36% | 2.32% |
| Short-term income taxes | 0.71% | 1.98% | 0.82% | 0.29% |
| Short-term unearned revenue | 11.95% | 11.40% | 11.17% | 9.59% |
| Other | 3.33% | 3.26% | 3.38% | 3.07% |
| Total current liabilities | 24.00% | 24.23% | 22.60% | 22.27% |
| Long-term debt | 19.77% | 23.26% | 27.91% | 30.39% |
| Long-term income taxes | 9.77% | 10.33% | 11.69% | 5.39% |
| Long-term unearned revenue | 1.06% | 1.58% | 1.47% | 1.06% |
| Deferred income taxes | 0.07% | 0.08% | 0.21% | 2.29% |
| Operating lease liabilities | 2.55% | 2.16% | 2.15% | 2.15% |
| Other long-term liabilities | 3.53% | 2.65% | 2.01% | 1.42% |
| Total liabilities | 60.74% | 64.29% | 68.04% | 64.96% |
| Commitments and contingencies | | | | |
| **Stockholders' equity:** | | | | |
| Common stock and paid-in capital – shares authorized 24,000; outstanding | 26.73% | 27.40% | 27.52% | 27.69% |
| Retained earnings | 11.47% | 8.43% | 5.29% | 7.10% |
| Accumulated other comprehensive loss | 1.06% | -0.12% | -0.84% | 0.25% |
| Total stockholders' equity | 39.26% | 35.71% | 31.96% | 35.04% |
| Total liabilities and stockholders' equity | 100.00% | 100.00% | 100.00% | 100.00% |

| COMMON SIZE RATIO CASH FLOW STATEMENTS (MICROSOFT_FOCAL) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jun. 30, 2020 | Jun. 30, 2019 | Jun. 30, 2018 | Jun. 30, 2017 |
| **Operations** | | | | |
| Net income | 30.96% | 31.18% | 15.02% | 26.39% |
| **Adjustments to reconcile net income to net cash from** | | | | |
| Depreciation, amortization, and other | 8.95% | 9.28% | 9.30% | 9.09% |
| Stock-based compensation expense | 3.70% | 3.70% | 3.57% | 3.38% |
| Net recognized gains on investments and derivatives | -0.15% | -0.63% | -2.00% | -2.15% |
| Deferred income taxes | 0.01% | -5.14% | -4.66% | -0.86% |
| **Changes in operating assets and liabilities:** | | | | |
| Accounts receivable | -1.80% | -2.23% | -3.50% | -1.26% |
| Inventories | 0.12% | 0.47% | -0.42% | 0.05% |
| Other current assets | -1.63% | -1.37% | -0.86% | 1.06% |
| Other long-term assets | -0.73% | -1.46% | -0.26% | -0.95% |
| Accounts payable | 2.11% | 0.18% | 1.04% | 0.08% |
| Unearned revenue | 1.55% | 3.55% | 5.37% | 3.96% |
| Income taxes | -2.54% | 2.33% | 16.48% | 1.86% |
| Other current liabilities | 0.94% | 1.13% | 0.72% | 0.37% |
| Other long-term liabilities | 0.94% | 0.47% | -0.02% | -0.12% |
| Net cash from operations | 42.43% | 41.47% | 39.76% | 40.91% |
| **Financing** | | | | |
| Repayments of short-term debt, maturities of 90 days or less, | - | - | -6.64% | -5.14% |
| Proceeds from issuance of debt | - | - | 6.51% | 45.92% |
| Cash premium on debt exchange | -2.39% | - | - | - |
| Repayments of debt | -3.86% | -3.18% | -9.12% | -8.20% |
| Common stock issued | 0.94% | 0.91% | 0.91% | 0.80% |
| Common stock repurchased | -16.06% | -15.53% | -9.71% | -12.21% |
| Common stock cash dividends paid | -10.58% | -10.97% | -11.51% | -12.27% |
| Other, net | -0.23% | -0.54% | -0.88% | -0.20% |
| Net cash used in financing | -32.19% | -29.31% | -30.44% | 8.71% |
| **Investing** | | | | |
| Additions to property and equipment | -10.80% | -11.07% | -10.54% | -8.42% |
| Acquisition of companies, net of cash acquired, and purchases | -1.76% | -1.90% | -0.80% | -26.87% |
| Purchases of investments | -53.97% | -45.85% | -124.48% | -183.19% |
| Maturities of investments | 46.46% | 15.93% | 23.89% | 29.04% |
| Sales of investments | 12.39% | 30.35% | 106.54% | 141.19% |
| Other, net | -0.87% | - | -0.09% | -0.20% |
| Net cash used in investing | -8.55% | -12.53% | -5.49% | -48.44% |
| Effect of foreign exchange rates on cash and cash equivalents | -0.14% | -0.09% | 0.05% | 0.02% |
| Net change in cash and cash equivalents | 1.55% | -0.47% | 3.88% | 1.19% |
| Cash and cash equivalents, beginning of period | 7.94% | 9.49% | 6.94% | 6.74% |
| Cash and cash equivalents, end of period | 9.49% | 9.02% | 10.82% | 7.94% |

| COMMON SIZE RATIO INCOME STATEMENTS (APPLE_C1) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Sep. 26, 2020 | Sep. 28, 2019 | Sep. 29, 2018 | Sep. 30, 2017 |
| Net sales | 100.00% | 100.00% | 100.00% | 100.00% |
| Cost of sales | 61.77% | 62.18% | 61.66% | 61.53% |
| Gross margin | 38.23% | 37.82% | 38.34% | 38.47% |
| Research and development | 6.83% | 6.23% | 5.36% | 5.05% |
| Selling, general and administrative | 7.25% | 7.01% | 6.29% | 6.66% |
| Total operating expenses | 14.09% | 13.25% | 11.65% | 11.71% |
| Operating income | 24.15% | 24.57% | 26.69% | 26.76% |
| Other income/(expense), net | 0.29% | 0.69% | 0.75% | 1.20% |
| Income before provision for income taxes | 24.44% | 25.27% | 27.45% | 27.96% |
| Provision for income taxes | 3.53% | 4.03% | 5.03% | 6.87% |
| Net income | 20.91% | 21.24% | 22.41% | 21.09% |

| COMMON SIZE RATIO BALANCE SHEET (APPLE_C1) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Sep. 26, 2020 | Sep. 28, 2019 | Sep. 29, 2018 | Sep. 30, 2017 |
| **Current assets:** | | | | |
| Cash and cash equivalents | 11.74% | 14.43% | 7.09% | 5.41% |
| Marketable securities | 16.34% | 15.28% | 11.04% | 14.36% |
| Accounts receivable, net | 4.98% | 6.77% | 6.34% | 4.76% |
| Inventories | 1.25% | 1.21% | 1.08% | 1.29% |
| Vendor non-trade receivables | 6.58% | 6.76% | 7.06% | 4.74% |
| Other current assets | 3.48% | 3.65% | 3.30% | 3.71% |
| Total current assets | 44.37% | 48.10% | 35.91% | 34.28% |
| **Non-current assets:** | | | | |
| Marketable securities | 31.15% | 31.12% | 46.70% | 51.88% |
| Property, plant and equipment, net | 11.35% | 11.04% | 11.29% | 9.00% |
| Other non-current assets | 13.13% | 9.74% | 6.09% | 4.84% |
| Total non-current assets | 55.63% | 51.90% | 64.09% | 65.72% |
| Total assets | 100.00% | 100.00% | 100.00% | 100.00% |
| **Current liabilities:** | | | | |
| Accounts payable | 13.06% | 13.66% | 15.28% | 11.79% |
| Other current liabilities | 13.18% | 11.14% | 9.11% | 8.14% |
| Deferred revenue | 2.05% | 1.63% | 1.63% | 2.01% |
| Commercial paper | 1.54% | 1.77% | 3.27% | 3.19% |
| Term debt | 2.71% | 3.03% | 2.40% | 1.73% |
| Total current liabilities | 32.54% | 31.23% | 31.70% | 26.86% |
| **Non-current liabilities:** | | | | |
| Term debt | 30.46% | 27.12% | 25.63% | 0.76% |
| Other non-current liabilities | 16.82% | 14.92% | 13.37% | 25.90% |
| Total non-current liabilities | 47.29% | 42.04% | 39.00% | 10.77% |
| Total liabilities | 79.83% | 73.27% | 70.70% | 37.42% |
| Commitments and contingencies | | | | |
| **Shareholders' equity:** | | | | |
| Common stock and additional paid-in capital, $0.00001 par value: | 15.68% | 13.34% | 10.99% | 9.56% |
| Retained earnings | 4.62% | 13.56% | 19.25% | 26.20% |
| Accumulated other comprehensive income/(loss) | -0.13% | -0.17% | -0.94% | -0.04% |
| Total shareholders' equity | 20.17% | 26.73% | 29.30% | 35.72% |
| Total liabilities and shareholders' equity | 100.00% | 100.00% | 100.00% | 100.00% |

| COMMON SIZE RATIO CASH FLOW STATEMENTS (APPLE_C1) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Sep. 26, 2020 | Sep. 28, 2019 | Sep. 29, 2018 | Sep. 30, 2017 |
| **Operating activities:** | 20.91% | 21.24% | 22.41% | 21.09% |
| Net income | | | | |
| **Adjustments to reconcile net income to cash generated by operating activities:** | | | | |
| Depreciation and amortization | 4.03% | 4.82% | 4.11% | 4.43% |
| Share-based compensation expense | 2.49% | 2.33% | 2.01% | 2.11% |
| Deferred income tax benefit | -0.08% | -0.13% | -12.27% | 2.60% |
| Other | -0.04% | -0.25% | -0.17% | -0.07% |
| **Changes in operating assets and liabilities:** | | | | |
| Accounts receivable, net | 2.52% | 0.09% | -2.00% | -0.91% |
| Inventories | -0.05% | -0.11% | 0.31% | -1.19% |
| Vendor non-trade receivables | 0.57% | 1.13% | -3.02% | -1.86% |
| Other current and non-current assets | -3.49% | 0.34% | -0.16% | -2.32% |
| Accounts payable | -1.48% | -0.74% | 3.45% | 3.91% |
| Deferred revenue | 0.76% | -0.24% | - | -0.26% |
| Other current and non-current liabilities | 3.25% | -1.81% | 14.48% | 0.48% |
| Cash generated by operating activities | 29.39% | 26.67% | 29.15% | 28.02% |
| **Investing activities:** | | | | |
| Purchases of marketable securities | -41.87% | -15.23% | -26.87% | -69.57% |
| Proceeds from maturities of marketable securities | 25.47% | 15.41% | 21.04% | 13.86% |
| Proceeds from sales of marketable securities | 18.39% | 21.90% | 18.01% | 41.25% |
| Payments for acquisition of property, plant and equipment | -2.66% | -4.03% | -5.01% | -5.43% |
| Payments made in connection with business acquisitions, net | -0.56% | -0.24% | -0.27% | -0.14% |
| Purchases of non-marketable securities | -0.08% | -0.38% | -0.70% | -0.23% |
| Proceeds from non-marketable securities | 0.03% | 0.63% | 0.13% | 0.05% |
| Other | -0.29% | -0.41% | -0.28% | -0.05% |
| Cash generated by/(used in) investing activities | -1.56% | 17.64% | 6.05% | -20.26% |
| **Financing activities:** | | | | |
| Proceeds from issuance of common stock | 0.32% | 0.30% | 0.25% | 0.24% |
| Payments for taxes related to net share settlement of equity awards | -1.32% | -1.08% | -0.95% | -0.82% |
| Payments for dividends and dividend equivalents | -5.13% | -5.43% | -5.16% | 5.57% |
| Repurchases of common stock | -26.36% | -25.71% | -27.39% | -14.35% |
| Proceeds from issuance of term debt, net | 5.86% | 2.68% | 2.62% | 12.50% |
| Repayments of term debt | -4.60% | -3.38% | -2.45% | -1.53% |
| Repayments of commercial paper, net | -0.35% | -2.30% | -0.01% | 1.68% |
| Other | -0.05% | -0.04% | - | - |
| Cash used in financing activities | -31.63% | -34.97% | -33.09% | -7.84% |
| Increase/(Decrease) in cash, cash equivalents and restricted cash | -3.80% | 9.34% | 2.12% | -0.09% |
| Cash, cash equivalents and restricted cash, ending balances | 14.49% | 19.30% | 9.76% | 8.85% |
| **Supplemental cash flow disclosure:** | | | | |
| Cash paid for income taxes, net | 3.46% | 5.87% | 3.92% | 5.06% |
| Cash paid for interest | 1.09% | 1.32% | 1.14% | 0.91% |

| COMMON SIZE RATIO INCOME STATEMENTS (DELL_C2) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jan. 31, 2020 | Feb. 01, 2019 | Feb. 02, 2018 | Feb. 03, 2017 |
| **Net revenue:** | | | | |
| Total net revenue | 100.00% | 100.00% | 100.00% | 100.00% |
| **Cost of net revenue:** | | | | |
| Total cost of net revenue | 68.60% | 72.35% | 74.02% | 78.04% |
| Gross margin | 31.40% | 27.65% | 25.98% | 21.96% |
| **Operating expenses:** | | | | |
| Selling, general, and administrative | 23.13% | 22.78% | 23.49% | 21.56% |
| Research and development | 5.42% | 5.08% | 5.55% | 4.24% |
| Total operating expenses | 28.55% | 27.86% | 29.04% | 25.80% |
| Operating income (loss) | 2.85% | -0.21% | -3.06% | -3.84% |
| Interest and other, net | -2.85% | -2.39% | -2.98% | -3.38% |
| Loss before income taxes | 0.00% | -2.61% | -6.03% | -7.23% |
| Income tax benefit | -6.00% | -0.20% | -2.33% | -2.28% |
| Net income (loss) | 6.00% | -2.41% | -3.70% | -4.94% |
| Less: Net income (loss) attributable to non-controlling interests | 0.99% | 0.14% | -0.10% | 3.08% |
| Net income (loss) attributable to Dell Technologies Inc. | 5.01% | -2.55% | -3.60% | -1.86% |

| COMMON SIZE RATIO BALANCE SHEET (DELL_C2) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jan. 31, 2020 | Feb. 01, 2019 | Feb. 02, 2018 | Feb. 03, 2017 |
| **Current assets:** | | | | |
| Cash and cash equivalents | 7.83% | 8.65% | 11.23% | 8.01% |
| Accounts receivable, net | 10.50% | 11.06% | 9.44% | 7.97% |
| Short-term financing receivables, net | 4.12% | 3.93% | 3.16% | 2.73% |
| Inventories, net | 2.76% | 3.26% | 2.16% | 2.15% |
| Other current assets | 5.81% | 5.41% | 4.74% | 3.51% |
| Total current assets | 31.02% | 32.32% | 32.47% | 26.03% |
| Property, plant, and equipment, net | 5.09% | 4.70% | 4.34% | 4.78% |
| Long-term investments | 0.73% | 0.90% | 3.35% | 3.22% |
| Long-term financing receivables, net | 4.08% | 3.78% | 3.00% | 2.24% |
| Goodwill | 35.08% | 35.85% | 32.14% | 32.92% |
| Intangible assets, net | 15.23% | 19.92% | 22.76% | 29.65% |
| Other non-current assets | 8.77% | 2.54% | 1.93% | 1.15% |
| Total assets | 100.00% | 100.00% | 100.00% | 100.00% |
| **Current liabilities:** | | | | |
| Short-term debt | 6.51% | 3.86% | 6.34% | 5.35% |
| Accounts payable | 16.88% | 17.18% | 14.76% | 12.20% |
| Accrued and other | 8.22% | 7.60% | 6.46% | 6.02% |
| Short-term deferred revenue | 12.52% | 11.58% | 9.35% | 8.68% |
| Total current liabilities | 44.13% | 40.22% | 36.91% | 32.26% |
| Long-term debt | 37.29% | 44.00% | 35.43% | 36.43% |
| Long-term deferred revenue | 10.87% | 9.90% | 7.42% | 7.13% |
| Other non-current liabilities | 4.53% | 5.66% | 5.86% | 7.90% |
| Total liabilities | 96.82% | 99.77% | 85.61% | 83.72% |
| Redeemable shares | 0.53% | 1.07% | 0.31% | 0.20% |
| **Stockholders' equity (deficit):** | | | | |
| Common stock and capital in excess of $0.01 par value | 13.54% | 14.41% | 16.01% | 17.09% |
| Treasury stock at cost | -0.05% | -0.06% | -1.16% | -0.64% |
| Accumulated deficit | -14.21% | -19.09% | -5.52% | -4.75% |
| Accumulated other comprehensive loss | -0.60% | -0.42% | 0.10% | -0.50% |
| Total Dell Technologies Inc. stockholders' deficit | -1.32% | -5.16% | 9.44% | 11.20% |
| Non-controlling interests | 3.98% | 4.31% | 4.64% | 4.88% |
| Total stockholders' equity (deficit) | 2.65% | -0.84% | 14.08% | 16.08% |
| Total liabilities, redeemable shares, and stockholders' | 100.00% | 100.00% | 100.00% | 100.00% |

| COMMON SIZE RATIO CASH FLOW STATEMENTS (DELL_C2) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Jan. 31, 2020 | Feb. 01, 2019 | Feb. 02, 2018 | Feb. 03, 2017 |
| **Cash flows from operating activities:** | | | | |
| Net income (loss) | 6.00% | -2.41% | -3.70% | -1.86% |
| **Adjustments to reconcile net income (loss) to net cash provided by operating activities:** | | | | |
| Depreciation and amortization | 6.67% | 8.55% | 10.92% | 7.94% |
| Stock-based compensation expense | 1.37% | 1.01% | 1.06% | 0.64% |
| Deferred income taxes | -6.88% | -1.47% | -3.30% | -3.30% |
| Provision for doubtful accounts — including financing receivables | 0.19% | 0.19% | 0.21% | 0.19% |
| Impairments | 0.67% | 0.21% | - | - |
| Other | 0.15% | 0.43% | 0.75% | 0.28% |
| **Changes in assets and liabilities, net of effects from acquisitions and dispositions:** | | | | |
| Accounts receivable | -0.31% | -1.22% | -2.01% | -3.11% |
| Financing receivables | -1.44% | -1.44% | -2.09% | -1.21% |
| Inventories | 0.34% | -1.59% | -0.41% | 1.73% |
| Other assets | -1.56% | -0.59% | -1.76% | 0.19% |
| Accounts payable | 0.97% | 1.05% | 4.78% | 1.21% |
| Deferred revenue | 4.04% | 3.77% | 3.48% | 3.11% |
| Accrued and other liabilities | -0.13% | 1.21% | 0.74% | 1.05% |
| Change in cash from operating activities | 10.08% | 7.71% | 8.66% | 3.81% |
| **Investments:** | | | | |
| Purchases | -0.20% | -1.02% | -5.55% | -1.25% |
| Maturities and sales | 0.54% | 7.30% | 4.91% | 1.89% |
| Capital expenditures | -2.43% | -1.28% | -1.53% | -1.12% |
| Capitalized software development costs | -0.36% | -0.37% | -0.47% | -0.33% |
| Acquisition of businesses, net | -2.66% | -1.01% | -0.83% | -60.50% |
| Divestitures of businesses, net | - | 0.16% | - | 11.06% |
| Asset acquisitions, net | -0.01% | -0.07% | -0.12% | - |
| Asset dispositions, net | - | -0.01% | -0.07% | - |
| Other | 0.04% | 0.04% | 0.04% | -0.08% |
| Change in cash from investing activities | -5.08% | 3.74% | -3.64% | -50.25% |
| **Cash flows from financing activities:** | | | | |
| Share repurchases for tax withholdings of equity awards | -0.59% | -0.43% | -0.49% | -0.15% |
| Dividends paid to VMware, Inc.'s public stockholders | - | -2.35% | - | - |
| Proceeds from the issuance of common stock | 0.71% | 0.89% | 0.17% | 0.26% |
| Repurchases of common stock of subsidiaries | -3.26% | -0.06% | -0.92% | -0.98% |
| Proceeds from debt | 22.22% | 14.40% | 18.24% | 75.38% |
| Repayments of debt | -24.00% | -12.64% | -15.51% | -27.28% |
| Other | -0.08% | -0.17% | -0.07% | 0.03% |
| Change in cash from financing activities | -5.00% | -15.81% | 0.51% | 51.13% |
| Effect of exchange rate changes on cash, cash equivalents, and restricted cash | -0.10% | -0.21% | 0.22% | 0.04% |
| Change in cash, cash equivalents, and restricted cash | -0.10% | -4.57% | 5.75% | 4.73% |
| Cash, cash equivalents, and restricted cash at beginning of the period | 11.11% | 15.87% | 12.44% | 11.09% |
| Cash, cash equivalents, and restricted cash at end of the period | 11.02% | 11.30% | 18.19% | 15.82% |
| Income tax paid | 1.53% | 0.82% | 1.17% | 1.57% |
| Interest paid | 2.71% | 2.59% | 2.77% | 2.53% |
| **Cash flows from financing activities:** | | | | |
| Repurchases of Class V Common Stock | - | -15.45% | -0.91% | -1.13% |

| COMMON SIZE RATIO INCOME STATEMENTS (HP_C3) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Oct. 31, 2020 | Oct. 31, 2019 | Oct. 31, 2018 | Oct. 31, 2017 |
| **Net revenue:** | | | | |
| Financing income | 1.74% | 1.57% | 1.45% | 1.37% |
| Total net revenue | 100.00% | 100.00% | 100.00% | 100.00% |
| **Costs and expenses:** | | | | |
| Financing interest | 1.00% | 1.02% | 0.90% | 0.92% |
| Research and development | 6.95% | 6.32% | 5.40% | 5.16% |
| Selling, general and administrative | 17.14% | 16.84% | 15.95% | 17.36% |
| Amortization of intangible assets | 1.40% | 0.92% | 0.95% | 1.11% |
| Impairment of goodwill | 3.21% | - | 0.29% | - |
| Restructuring charges | - | - | 0.06% | 1.34% |
| Transformation costs | 3.52% | 1.55% | 1.34% | 1.24% |
| Disaster charges (recoveries) | 0.10% | -0.02% | 0.00% | 0.32% |
| Acquisition, disposition and other | 0.30% | 2.60% | 0.27% | 0.70% |
| Separation costs | - | - | 0.03% | 0.86% |
| Defined benefit plan remeasurement | - | - | - | -0.03% |
| Total costs and expenses | 101.22% | 95.63% | 94.37% | 98.05% |
| Earnings (loss) from continuing | -1.22% | 4.37% | 5.63% | 1.95% |
| Interest and other, net | -0.80% | -0.61% | -0.89% | -1.13% |
| Tax indemnification adjustments | -0.37% | 1.29% | -4.39% | -0.01% |
| Non-service net periodic benefit credit | 0.50% | 0.20% | 0.39% | 0.21% |
| Earnings from equity interests | 0.25% | 0.07% | 0.12% | -0.08% |
| Earnings (loss) from continuing | -1.64% | 5.33% | 0.87% | 0.94% |
| (Provision) benefit for taxes | 0.44% | -1.73% | 5.65% | 0.57% |
| Net earnings (loss) from continuing | -1.19% | 3.60% | 6.52% | 1.51% |
| Net loss from discontinued operations | - | - | -0.34% | -0.32% |
| Net earnings (loss) | -1.19% | 3.60% | 6.18% | 1.19% |

| COMMON SIZE RATIO BALANCE SHEETS (HP_C3) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Oct. 31, 2020 | Oct. 31, 2019 | Oct. 31, 2018 | Oct. 31, 2017 |
| **Current assets:** | | | | |
| Cash and cash equivalents | 7.84% | 7.24% | 8.79% | 15.60% |
| Accounts receivable, net of allowance for doubtful | 6.27% | 5.71% | 5.88% | 5.00% |
| Financing receivables, net of allowance for doubtful | 7.02% | 6.90% | 6.12% | 5.50% |
| Inventory | 4.95% | 4.61% | 4.41% | 3.77% |
| Assets held for sale | 0.14% | 0.09% | 0.01% | 0.02% |
| Other current assets | 4.43% | 4.69% | 5.91% | 5.02% |
| Total current assets | 30.65% | 29.23% | 31.12% | 34.92% |
| Property, plant and equipment | 10.41% | 11.69% | 11.06% | 10.21% |
| Long-term financing receivables and other assets | 19.52% | 17.22% | 20.47% | 20.52% |
| Investments in equity interests | 4.02% | 4.35% | 4.32% | 4.13% |
| Goodwill | 33.36% | 35.34% | 31.60% | 28.52% |
| Intangible assets | 2.04% | 2.18% | 1.42% | 1.70% |
| Total assets | 100.00% | 100.00% | 100.00% | 100.00% |
| **Current liabilities:** | | | | |
| Notes payable and short-term borrowings | 6.95% | 23.10% | 11.66% | 20.34% |
| Accounts payable | 9.97% | 29.20% | 35.42% | 32.09% |
| Employee compensation and benefits | 2.58% | 7.94% | 8.21% | 6.11% |
| Taxes on earnings | 0.27% | 0.97% | 2.20% | 2.27% |
| Deferred revenue | 6.35% | 16.88% | 18.47% | 16.53% |
| Accrued restructuring | 0.68% | 1.02% | 1.71% | 2.35% |
| Other accrued liabilities | 7.90% | 20.89% | 22.33% | 20.31% |
| Total current liabilities | 34.69% | 100.00% | 100.00% | 100.00% |
| Long-term debt | 22.56% | 49.04% | 58.94% | 53.80% |
| Other non-current liabilities | 12.95% | 31.84% | 40.03% | 46.48% |
| Commitments and contingencies | | | | |
| **HPE stockholders' equity:** | | | | |
| Preferred stock, $0.01 par value (300 shares | 0.00% | 0.00% | 0.00% | 0.00% |
| Common stock, $0.01 par value (9,600 shares | 0.02% | 0.03% | 0.03% | 0.03% |
| Additional paid-in capital | 52.49% | 54.91% | 54.68% | 54.69% |
| Accumulated deficit | -15.50% | -14.73% | -10.63% | -11.79% |
| Accumulated other comprehensive loss | -7.29% | -7.19% | -5.80% | -4.71% |
| Total HPE stockholders' equity | 29.71% | 33.01% | 38.27% | 38.21% |
| Non-controlling interests | 0.09% | 0.10% | 0.06% | 0.06% |
| Total stockholders' equity | 29.80% | 33.10% | 38.34% | 38.28% |
| Total liabilities and stockholders' equity | 100.00% | 100.00% | 100.00% | 100.00% |

| COMMON SIZE RATIO CASH FLOW STATEMENT (HP_C3) | | | | |
|---|---|---|---|---|
| Date | 12 Months Ended | | | |
| | Oct. 31, 2020 | Oct. 31, 2019 | Oct. 31, 2018 | Oct. 31, 2017 |
| **Cash flows from operating activities:** | | | | |
| Net earnings (loss) | -1.19% | 3.60% | 6.18% | 1.19% |
| **Adjustments to reconcile net earnings (loss) to net cash provided** | | | | |
| Depreciation and amortization | 9.73% | 8.70% | 8.35% | 10.57% |
| Impairment of goodwill | 3.21% | - | 0.29% | - |
| Stock-based compensation expense | 1.02% | 0.92% | 0.93% | 1.48% |
| Provision for inventory and doubtful accounts | 1.14% | 0.82% | 0.64% | 0.45% |
| Restructuring charges | 2.85% | 0.76% | 1.78% | 3.34% |
| Deferred taxes on earnings | -1.09% | 3.70% | 7.22% | -3.89% |
| Earnings from equity interests | -0.25% | -0.07% | -0.12% | 0.08% |
| Dividends received from equity investee | 0.61% | 0.54% | 0.53% | 0.34% |
| Other, net | 0.60% | 0.70% | -0.51% | 1.88% |
| **Changes in operating assets and liabilities, net of acquisitions:** | | | | |
| Accounts receivable | -1.71% | 1.28% | -0.71% | 1.58% |
| Financing receivables | -1.80% | -1.41% | -1.19% | -1.60% |
| Inventory | -1.95% | 0.16% | -0.84% | -1.88% |
| Accounts payable | -0.83% | -1.80% | -0.09% | 3.44% |
| Taxes on earnings | -0.45% | -3.75% | -14.64% | -0.92% |
| Restructuring | -1.77% | -1.14% | -2.10% | -2.77% |
| Other assets and liabilities | 0.20% | 0.70% | 3.88% | -8.67% |
| Net cash provided by operating activities | 8.30% | 13.72% | 9.61% | 4.62% |
| **Cash flows from investing activities:** | | | | |
| Investment in property, plant and equipment | -8.83% | -9.80% | -9.58% | -10.87% |
| Proceeds from sale of property, plant and equipment | 2.61% | 2.05% | 3.55% | 2.35% |
| Purchases of available-for-sale securities and other investments | -0.37% | -0.13% | -0.11% | -0.16% |
| Maturities and sales of available-for-sale securities and other | 0.18% | 0.09% | 0.32% | 0.13% |
| Financial collateral posted | -2.39% | -1.38% | -5.27% | -4.27% |
| Financial collateral received | 2.46% | 2.55% | 5.63% | 1.98% |
| Payments made in connection with business acquisitions, net of | -3.21% | -5.24% | -0.67% | -7.63% |
| Proceeds from business divestitures, net | 0.00% | 0.00% | 0.04% | -0.07% |
| Net cash used in investing activities | -9.55% | -11.87% | -6.09% | -18.53% |
| **Cash flows from financing activities:** | | | | |
| Short-term borrowings with original maturities less than 90 days, net | -0.03% | -0.18% | 0.02% | 0.06% |
| Proceeds from debt, net of issuance costs | 25.97% | 12.07% | 7.96% | 7.82% |
| Payment of debt | -18.90% | -7.56% | -13.41% | -13.10% |
| Net proceeds (payments) related to stock-based award activities | - | - | - | 0.02% |
| Net proceeds (payments) related to stock-based award activities | -0.13% | 0.16% | 0.38% | 0.37% |
| Repurchase of common stock | -1.32% | -7.72% | -11.56% | -8.85% |
| Cash dividends paid to non-controlling interests, net of | -0.03% | - | - | -0.10% |
| Cash dividends paid | -2.29% | - | -0.03% | - |
| Net cash provided by (used in) financing activities | 3.27% | -2.09% | -1.85% | -1.48% |
| Increase (decrease) in cash, cash equivalents and restricted cash | 2.02% | -5.31% | -18.13% | 0.57% |
| (Decrease) in cash, cash equivalents and restricted cash | 15.11% | -3.46% | -14.61% | -13.34% |
| Cash, cash equivalents and restricted cash at beginning of period | 15.11% | 17.45% | 31.09% | 46.56% |
| Cash, cash equivalents and restricted cash at end of period | 17.13% | 13.99% | 16.48% | 33.22% |
| **Supplemental cash flow disclosures:** | | | | |
| Income taxes paid, net of refunds | 1.10% | 1.78% | 1.74% | 2.90% |
| Interest expense paid | 2.13% | 2.04% | 1.97% | 1.44% |
| **Supplemental schedule of non-cash investing and financing** | | | | |
| Net assets transferred to Everett and Seattle | - | - | - | 20.60% |
| Everett SpinCo, Inc. | | | | |
| **Cash flows from financing activities:** | | | | |
| Net transfer of cash and cash equivalents | - | - | -0.14% | -2.46% |
| Cash dividend | - | - | - | 10.42% |
| Seattle SpinCo, Inc. | | | | |
| **Cash flows from financing activities:** | | | | |
| Net transfer of cash and cash equivalents | - | - | 0.54% | -0.79% |
| Cash dividend | - | - | - | 8.66% |

## Cross Sectional Analysis (2020)

| Cross Sectional Analysis Income Statement | | | | |
|---|---|---|---|---|
| Date | Year 2020 | | | |
| | Microsoft | Apple | Dell | HP |
| Revenue | 100.00% | 100.00% | 100.00% | 100.00% |
| Cost of revenue | 32.22% | 61.77% | 68.60% | 68.61% |
| Gross margin | 67.78% | 38.23% | 31.40% | 31.39% |
| Research and development | 13.47% | 6.83% | 5.42% | 6.95% |
| Sales and marketing | 13.70% | 7.25% | 23.13% | 17.14% |
| General and administrative | 3.57% | | | |
| Restructuring | 0.00% | - | - | - |
| Operating income | 37.03% | 24.15% | 2.85% | - |
| Other income, net | 0.05% | - | - | - |
| Income before income taxes | 37.08% | 24.44% | - | - |
| Provision for income taxes | 6.12% | 3.53% | - | 0.44% |
| Net income | 30.96% | 20.91% | 6.00% | -1.19% |

| Cross Sectional Analysis Balance Sheet | | | | |
|---|---|---|---|---|
| Date | Year 2020 | | | |
| | Microsoft | Apple | Dell | HP |
| **Current assets:** | | | | |
| Cash and cash equivalents | 4.51% | 11.74% | 7.83% | 7.84% |
| Short-term investments | 40.81% | 16.34% | - | - |
| Total cash, cash equivalents, and short-term investments | 45.31% | 28.08% | - | - |
| Accounts receivable, net of allowance for doubtful accounts | 10.62% | 4.98% | 10.50% | 6.27% |
| Inventories | 0.63% | 1.25% | 2.76% | 4.95% |
| Other | 3.81% | 10.06% | 5.81% | 4.43% |
| Total current assets | 60.37% | 44.37% | 31.02% | 30.65% |
| Property and equipment, net of accumulated depreciation | 14.65% | 11.35% | 5.09% | 10.41% |
| Operating lease right-of-use assets | 2.90% | - | - | - |
| Equity investments | 0.98% | - | - | - |
| Goodwill | 14.39% | - | 35.08% | 33.36% |
| Marketable securities | - | 31.15% | N/A | 19.52% |
| Intangible assets, net | 2.34% | - | 15.23% | 2.04% |
| Other long-term assets | 4.36% | 13.13% | - | - |
| Total assets | 100.00% | 100.00% | 100.00% | 100.00% |
| **Current liabilities:** | | | | |
| Accounts payable | 4.16% | 13.06% | 16.88% | 9.97% |
| Short-term debt | 0.00% | 2.71% | 6.51% | 6.95% |
| Current portion of long-term debt | 1.24% | - | 8.22% | - |
| Accrued compensation | 2.61% | - | - | 2.58% |
| Short-term income taxes | 0.71% | - | - | 0.27% |
| Short-term unearned revenue | 11.95% | 2.05% | 12.52% | 6.35% |
| Other | 3.33% | 13.18% | 4.53% | 7.90% |
| Total current liabilities | 24.00% | 32.54% | 44.13% | 34.69% |
| Long-term debt | 19.77% | 30.46% | 37.29% | 22.56% |
| Long-term income taxes | 9.77% | - | - | - |
| Long-term unearned revenue | 1.06% | - | 10.87% | - |
| Deferred income taxes | 0.07% | - | - | - |
| Operating lease liabilities | 2.55% | - | - | - |
| Other long-term liabilities | 3.53% | 16.82% | - | 12.95% |
| Total liabilities | 60.74% | 79.83% | 96.82% | 70.20% |
| Commitments and contingencies | | | | |
| **Stockholders' equity:** | | | | |
| Common stock and paid-in capital | 26.73% | 15.68% | 13.54% | 52.51% |
| Retained earnings | 11.47% | 4.62% | N/A | -15.50% |
| Accumulated other comprehensive loss | 1.06% | -0.13% | -0.60% | -7.29% |
| Total stockholders' equity | 39.26% | 20.17% | 2.65% | 29.80% |
| Total liabilities and stockholders' equity | 100.00% | 100.00% | 100.00% | 100.00% |

| Cross Sectional Analysis Cash Flow Statement | | | | |
|---|---|---|---|---|
| Date | Year 2020 | | | |
| | Microsoft | Apple | Dell | HP |
| **Operations** | | | | |
| Net income | 30.96% | 20.91% | -6.00% | -1.19% |
| **Adjustments to reconcile net income to net** | | | | |
| Depreciation, amortization, and other | 8.95% | 4.03% | 6.67% | 9.73% |
| Stock-based compensation expense | 3.70% | 2.49% | 1.37% | 1.02% |
| Net recognized gains on investments and | -0.15% | - | - | - |
| Deferred income taxes | 0.01% | -0.08% | -6.88% | - |
| **Changes in operating assets and liabilities:** | | | | |
| Accounts receivable | -1.80% | 2.52% | -0.31% | -1.71% |
| Inventories | 0.12% | -0.05% | 0.34% | -1.95% |
| Other current assets | -1.63% | -3.49% | -1.56% | |
| Other long-term assets | -0.73% | - | - | 0.20% |
| Accounts payable | 2.11% | -1.48% | 0.97% | -0.83% |
| Unearned revenue | 1.55% | - | - | - |
| Income taxes | -2.54% | - | - | -0.45% |
| Other current liabilities | 0.94% | | -0.13% | |
| Other long-term liabilities | 0.94% | 3.25% | - | - |
| Net cash from operations | 42.43% | 29.39% | 10.08% | 8.30% |
| **Financing** | | | | |
| Repayments of short-term debt, maturities | 0.00% | - | - | -0.03% |
| Proceeds from issuance of debt | 0.00% | - | - | 25.97% |
| Cash premium on debt exchange | -2.39% | - | - | - |
| Repayments of debt | -3.86% | -4.60% | -24.00% | - |
| Common stock issued | 0.94% | - | - | - |
| Common stock repurchased | -16.06% | - | - | -1.32% |
| Common stock cash dividends paid | -10.58% | - | - | -2.29% |
| Other, net | -0.23% | -0.05% | -0.08% | - |
| Net cash used in financing | -32.19% | -31.63% | -5.00% | 3.27% |
| **Investing** | | | | |
| Additions to property and equipment | -10.80% | - | - | -8.83% |
| Acquisition of companies, net of cash | -1.76% | -2.66% | -2.66% | -3.21% |
| Purchases of investments | -53.97% | - | -0.20% | -0.37% |
| Maturities of investments | 46.46% | 25.47% | 0.54% | 0.18% |
| Sales of investments | 12.39% | - | - | 2.61% |
| Other, net | -0.87% | -0.29% | 0.04% | - |
| Net cash used in investing | -8.55% | -1.56% | -5.08% | -9.55% |

## Reference

Microsoft 10-K annual report from 2017 to 2020
Apple 10-K annual report from 2017 to 2020
Dell 10-K annual report from 2017 to 2020
HP 10-K annual report from 2017 to 2020

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"Global Computer Hardware Market Data And Industry Growth Analysis." *The Business Research Company*, www.thebusinessresearchcompany.com/report/computer-hardware-global-market-report-2020-30-covid-19-impact-and-recovery.

"Microsoft's Segment Information ." *Microsoft Investor Relations*, www.microsoft.com/en-us/Investor/segment-information.aspx.

1. Discuss the impact of economic conditions
    a. Market-wide
    b. Industry-specific
    c. Company-specific
2. Define the industry
    a. Narrower and/or broader definition
    b. Identify the main competitors
        - Including, but not only, but the three competitors also selected
        - Identify industry characteristics
            - Level of competition
            - Barriers of entry
            - Monopoly, etc
3. Use **SWOT analysis**
    a. Briefly analyze the competitive landscape for the company
    b. Identify and discuss company strategies.
    c. Compared with main competitors.
    d. What are the firm's competitive advantages?
4. Explore the financial statements and get the information regarding company basics:
    a. What accounting standards are used, US GAAP, IFRS, or others?
    b. What is the date of the most recent fiscal year-end?
    c. Who is the company's auditor(s)?
    d. Are any concerns raised in the audit report?
    e. What is the market capitalization at the most recent year-end?
    f. Obtain the year-end stock price from an investment website such as Seeking Alpha or Yahoo Finance.
    g. Compare market cap with the book value (total equity) of the company
5. Prepare common-size financial statements (IS, BS, and SCF).
    a. For the company.
    b. For the three competitors/peers selected.
    c. For the four companies (i.e., your focal company and its three competitors)
    d. Prepare common-size F/S for the most recent 4 years with available data.
    e. Say, if financial statements for the fiscal year 2020 have not been available, use the fiscal year period 2016-2019.
6. Analyze common-size B/S and I/S: ---- Week 9 Tue
    a. Focus on accounts/items on B/S and I/S that are important to your focal firm.

b. Conduct **time-series analysis** and **cross-sectional analysis** for important items on common-size B/S and I/S.
   - Specifically, analyze the company over the period (4 years) (i.e., time-series analysis);
   - Analyze the company against its three competitors (i.e., cross-sectional analysis).
   - **Bonus**: conduct a combined time-series and cross-sectional analysis.
     - For instance, compare the time trend of your focal company with the time-trend of its competitors for important items.

c. Some questions to consider:
   - Are there any major differences over time and between companies?
   - Do any patterns emerge?
   - B/S:
     - What are the company's largest assets?
     - What proportion of total assets is financed by owners vs. non-owners?
   - I/S:
     - What is the level and trend for revenues? (growth rate)
     - What are the major expenses?
     - Are there any unusual or discontinued items?
     - Are they large in magnitude (material)?

7. Revenue analysis: **Ziyi Yang & Qingxuan Yu**
   a. Revenue is the largest item on the income statement, and we must assess it on a quantitative and qualitative basis.
   b. What are the company's revenue sources? What are the main business segments (or product segments, or major customers, if the firm discloses)? Find the footnote on segment revenues and profits.
   c. If the company distinguishes among types of revenue on the income statement, use horizontal and vertical analyses to identify any changes in the product line mix or where sales are growing most quickly.
   d. Assess each company's revenue recognition policy by comparing it with the other and with those of some other close competitors.
   e. Is unearned revenue reported by the company? If so, how big is it (use the common size, as a percentage of total assets), and is it fluctuating over time?

8. Do profitability and risk analysis. **Ziyi Yang & Qingxuan Yu**
   a. Don't forget to adjust, if necessary.
   b. Compute main ratios.
      - For profitability analysis, calculate ROE and its disaggregation: ROA and FL. For ROA, further, decompose it to PM and ATO. For PM, further decompose it to ratios based on common-size I/S (e.g., gross profit margin and operating expense margin). For turnover, further, analyze different types of turnover if they are important for the company (e.g., A/R turnover, Inventory turnover, PPE turnover, A/P turnover, and cash conversion cycle).
      - For credit analysis, calculate coverage ratios, liquidity ratios, and solvency ratios. Also, construct Altman's Z-score to assess the company's bankruptcy risk.
   c. What do these ratios indicate? How to interpret the ratios?

d. What are the company's profitability and productivity?
e. Did the company obtain new debt or repay the old debt? Read the debt footnote and the lease footnote (if the company uses leases). Is there any mention of default or renegotiated covenants in the 10-K as this can indicate a decrease in creditworthiness?
f. What is the company's short-term and long-term credit risk? Bankruptcy risk? – Conduct time-series analysis and cross-sectional analysis for profitability and credit analysis.
   - Specifically, analyze the company over the period (4 years) (i.e., time-series analysis); analyze the company against its three competitors (i.e., cross-sectional analysis).
   - Bonus: conduct a combined time-series and cross-sectional analysis. For instance, compare the time trend of your focal company with the time-trend of its competitors for important items.

9. Analyze the statement of cash flow. **Yifan & Lingling**
   a. Look at levels and changes. Incorporate information regarding sales(revenue - raw number), sales growth(percentage), earnings(net income), and earnings growth in your analysis (if possible). ✅
   b. CFO, CFI vs. CFF: relationships, trends, life cycle stage, etc. Look at CFO vs. CFI. Look at CFO vs. capital expenditures (Capex). ✅
   c. Analyze each section.
      - CFO: What does it say about the firm's operations and working capital? ✅ Compute cash collected from customers.
      - CFI: Is the firm growing? Type of growth? ✅
      - CFF: Is the firm increasing/decreasing its external financing? Type of financing? Dividends? ✅
   d. Anything of concern? Or not?
   e. Conduct time-series analysis and cross-sectional analysis for important items on CF/S. ✅
      - Specifically, analyze the company over the period (4 years) ✅
      - (i.e., time-series analysis); analyze the company against its three competitors (i.e., cross-sectional analysis). ✅
      - Bonus: conduct a combined time-series and cross-sectional analysis. For instance, compare the time trend of your focal company with the time-trend of its competitors for important items. ✅

10. Accounting Quality **Yifan & Lingling**
   a. Evaluating accounting quality is more of an art than a science. The point is to form an overall opinion about the reliability of the numbers in the financial statements.

- Does the company report non-GAAP earnings? ☑ What items do they exclude or include? ☑ Do the four companies you analyze report similar one-time items? Do the items seem reasonable, or do we detect some self-serving disclosures?
- Consider the list in the Research Insight Box (attached at the end), and use it to assess the quality of the company's reported numbers.
- Find the consensus analysts' EPS forecast for the recent year-end. How did our company fare? Were there any one-time items or unusual changes in any expenses that might have caused the company to just meet or beat the forecast? This could indicate earnings management.

b. Provide conclusions, including comments alluding to potential investment recommendations.

11. Would expect to include the complete analyses following the guidelines (including what you have done for the milestone report)
12. Discussions regarding the industry, the economic conditions, and the companies' strategies should not take up more than 1/4th of your write-up (excluding tables and figures) •
13. Appendix: