**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**

# Master's Thesis

## Financial Statement Analysis; case study of Amazon.com, Inc.

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

# DIPLOMA THESIS ASSIGNMENT

Bc. Ma Nathalie Marucot, BA (Hons)

Economics and Management
Economics and Management

Thesis title

**Financial Statement Analysis; case study of Amazon.com, Inc.**

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**Objectives of thesis**

The main aim of the thesis is to asses the financial position of one of the technology giants in the world such as Amazon. This study involves using financial data and models to assess Amazon's profitability, liquidity and growth trajectory. Additionally, Amazon's financial performance in the last five years would be compared including how the pandemic has impacted its stocks. This would provide insight on the factors that has contributed to its growth despite the downturn in the global economy.

**Methodology**

The study will explore the secondary data concerning a general overview of Amazon.com, Inc. This will provide a better understanding of the aspects that have contributed to its growth. Moreover, following the theoretical overview, a financial statement analysis will be presented through the use of financial ratios and models. In addition to this, horizontal and vertical analysis will be conducted to compare Amazon's performance in the last five years. Lastly, Amazon's stock price will be examined to evaluate its growth.

**The proposed extent of the thesis**

60 – 80

**Keywords**

financial analysis, Amazon, horizontal analysis, vertical analysis, financial statement

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**Recommended information sources**

Bragg, S.M. (2012). Financial analysis: a controller's guide. 2nd edn. John Wiley & Sons. ISBN 978-0-470-05518-2

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Prague on 30. 03. 2022

**Declaration**

I declare that I have worked on my diploma thesis titled "financial statement analysis: case study of Amazon.com" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 31.03.2022 ______________________________

**Acknowledgement**

I would like to thank my supervisor, Ing. Karel Malec, Ph.D. for his time and effort in providing recommendations and advice during my work on the diploma thesis. I would like to thank my professors who shared their knowledge and wisdom during my time in Czech University of Life Sciences. Lastly, big thanks to my family, friends and classmates who helped me and supported me all this time.

# Financial Statement Analysis; case study of Amazon.com, Inc.

**Abstract**

This paper explores the financial performance of the world's most known e-commerce company, Amazon. This paper examines Amazon's history from its beginning to becoming the world's most valuable company. This thesis focuses on Amazon's business through its continued expansion and business acquisitions. This study provided theoretical background on e-commerce, Amazon's first mover strategy and its diversification strategy. Amazon's financial performance within 2016 to 2020 was analyzed including how the pandemic has impacted its business. It involved financial data and models to assess Amazon's profitability, liquidity, growth trajectory as well as bankruptcy model such as Altman Z-score model in order to achieve the aim. The study shows Amazon has earned tremendous growth throughout the years 2016 to 2020, especially the year of 2020 which is its most favorable year despite the downturn in the global economy. The analysis results can contribute to studies that shows how companies can achieve greater profitability with diversification strategy.

**Keywords:** financial ratios, horizontal analysis, vertical analysis, Amazon.com, e-commerce

# Analýza finančních výkazů; případová studie Amazon.com


## Abstrakt

Tento článek zkoumá finanční výkonnost nejznámější světové společnosti v oblasti elektronického obchodování, společnosti Amazon. Článek zkoumá historii společnosti Amazon od jejích počátků až po získání pozice nejhodnotnější společnosti na světě. Tato práce se zaměřuje na podnikání společnosti Amazon prostřednictvím její neustálé expanze a obchodních akvizic. Tato studie poskytla teoretické základy elektronického obchodování, strategii prvního tahouna Amazonu a jeho diverzifikační strategii. Byla analyzována finanční výkonnost společnosti Amazon v období 2016 až 2020 včetně toho, jak pandemie ovlivnila její podnikání. K dosažení cíle zahrnovala finanční údaje a modely k posouzení ziskovosti, likvidity, trajektorie růstu společnosti Amazon a také bankrotní model, jako je Altmanův model Z-skóre. Ze studie vyplývá, že společnost Amazon dosáhla v letech 2016 až 2020 obrovského růstu, zejména v roce 2020, který je pro ni nejpříznivější. Výsledky analýzy mohou přispět ke studiím, které ukazují, jak mohou společnosti dosáhnout vyšší ziskovosti pomocí strategie diverzifikace.



**Klíčová slova:** analýza finančních ukazatelů, finanční analýza, horizontální analýza, vertikální analýza, Amazon.com, e-komerce

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# List of abbreviations

AWS – Amazon Web Services

EPS – Earnings per Share

ROA – Return on Assets

ROE – Return on Equity

# 1 Introduction

The world economy is seeing a progress. All organizations are changing into data based tasks through internet based advancements as cited by Jain et al.(2021). The pace of technological change is so rapid that modern e-commerce is currently causing major changes in the business environment, affecting every aspect of the industry. The web has expanded the reach of businesses. The huge amount business data accessible through worldwide organizations that facilitates information gathering between companies, their customers and different divisions of business is expanding dramatically.

Globalization and information technology (IT) are changing the way businesses work. In addition, due to the unprecedented event of COVID19 pandemic situation in the year 2020, companies have adapted to remote working and acceleration of digitization of their businesses. Companies nowadays are investing heavily in IT infrastructure that drives the expansion of their business. For instance, Amazon.com is one of the most well-known e-commerce company in the world.

Amazon.com Inc is one of the most valuable company in the world according to Forbes (2020). Amazon ranked fourth in the list with brand value of $135.4 billion following Apple, Google and Microsoft in the rankings. Amazon has grown at a tremendous rate from making losses in its first few years to earning net income of $21 billion in 2020 despite the downturn in the global economy. Thus, this paper looks into the details of Amazons success. One way of looking at its success is by how Amazon manages their finances through its financial statements. Hence, its financial statements are analyzed.

According to Gitman (2006) financial analysis is an important activity for businesses as this helps the company improve its profits and decision making. The company can make comparison and where they have gone wrong and find ways to improve it. The firm can also use its analysis in asking for loans from investors or banks and also it can be useful when expanding its investments. For that reason, horizontal and vertical analysis have been provided in this study as well as ratio analysis, DuPont analysis and Altman Z-model are presented in the next chapters.

# 2 Objectives and Methodology

The objectives and methodology chapter are a significant part of the study. It presents the aim and research question of the study. Also, it shows the details about the research methodology chosen by the researcher to obtain the goals and objectives of the research. This chapter describes the techniques used for collecting and analyzing the data.

## 2.1 Objectives

The main aim of the thesis is to assess the financial statements of one of the technology giants in the world such as Amazon in years 2016 to 2020. This study involves using financial data and models to assess Amazon's profitability, liquidity, and growth trajectory. Additionally, Amazon's financial performance in the last five years would be compared including how the pandemic has impacted its stocks. This would provide insight on the factors that has contributed to its growth despite the downturn in the global economy. Thus, the following research questions are as follows:

**Research Question 1:** Based on the indicators of financial analysis, how did the financial position of Amazon changed within the years 2016 to 2020?

**Research Question 2:** What are the reasons of these changes in profitability and financial performance of Amazon?

**Research Question 3:** What are the factors that influenced these changes?

## 2.2 Methodology

This chapter presents the methodology conducted in this research. The study explores the secondary data concerning an overview of Amazon.com, Inc. This provides a better understanding of the aspects that have contributed to its growth. Moreover, following the theoretical overview, a financial statement analysis was presented with financial ratios and models. In addition to this, horizontal and vertical analysis was conducted to compare Amazon's performance in the last five years. The research gathered information from Amazon's annual reports and published studies. This paper looks into the period 2016 to 2020 wherein the financial data was provided.

*Table 1. Methods of Financial Analysis*

| Methods of Financial Analysis | Financial Indicators |
|---|---|
| Horizontal Analysis of Financial Statements | Horizontal Analysis of Balance Sheet<br>Horizontal Analysis of Income Statement |
| Vertical Analysis of Financial Statements | Vertical Analysis of Balance Sheet<br>Vertical Analysis of Income Statement |
| Ratio Analysis | Liquidity Ratios<br>Activity Ratios<br>Debt Ratios<br>Profitability Ratios |
| DuPont Analysis | Return on total Assets (ROA)<br>Financial Leverage Multiplier<br>Return on Common Equity (ROE) |
| Altman's Z-score | Z-score |

Source: Friedlob and Schleifer (2003)

**a. Liquidity Ratios**

In order to measure the liquidity of Amazon the two basic formulas are as follows:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (1)$$

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}} \quad (2)$$

**b. Activity Ratios**

The following ratios are used in order to assess the activity efficiency of Amazon:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventory}} \quad (3)$$

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total assets}} \quad (4)$$

**c. Debt Ratios**

The financial leverage of Amazon are evaluated through the following ratios:

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}} \quad (5)$$

$$\text{Times Interest Earned Ratio} = \frac{\text{Earnings before interest and taxes}}{\text{Interest}} \quad (6)$$

**d. <u>Profitability Ratios</u>**

The following measures are used to determine the level of profitability of Amazon:

$$\text{Gross profit margin} = \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}} = \frac{\text{Gross profits}}{\text{Sales}} \quad (7)$$

$$\text{Operating profit margin} = \frac{\text{Operating profits}}{\text{Sales}} \quad (8)$$

$$\text{Net profit margin} = \frac{\text{Earnings available for common stockholders}}{\text{Sales}} \quad (9)$$

$$\text{Earnings per share} = \frac{\text{Earnings available for common stockholders}}{\text{Number of shares of common stock outstanding}} \quad (10)$$

$$Return\ on\ total\ assets = \frac{Earnings\ available\ for\ common\ stockholders}{Total\ assets} \quad (11)$$

$$Return\ Common\ Equity\ (ROE) = \frac{Earnings\ available\ for\ common\ stockholders}{Common\ stock\ equity} \quad (12)$$

**e. <u>DuPont Analysis</u>**

The following formulas were used to analyze the financial condition of Amazon.

$$Return\ on\ total\ assets = \frac{Earnings\ available\ for\ common\ stockholders}{Total\ assets} \quad (13)$$

$$Financial\ Leverage\ Multiplier = \frac{\text{Total Assets}}{\text{Common Stock Equity}} \quad (14)$$

$$Return\ on\ Common\ Equity\ (ROE) = \frac{Earnings\ available\ for\ common\ stockholders}{Common\ stock\ equity} \quad (15)$$

**f. <u>Altman Z-score Model</u>**

In order to obtain the Z-score, the following formula are applied as follows:

$$Z = 1.2\, x_1 + 1.4\, x_2 + 3.3\, x_3 + 0.6\, x_4 + 0.999 x_5 \quad (16)$$

Where:

$$x_1 = \frac{Net\ working\ capital}{Total\ assets} \quad (17)$$

$$x_2 = \frac{Retained\ earnings}{Total\ assets} \quad (18)$$

$$x_3 = \frac{EBIT}{Total\ assets} \quad (19)$$

$$x_4 = \frac{Shareholders'\ equity}{Total\ liabilities} \quad (20)$$

$$x_5 = \frac{Sales}{Total\ assets} \quad (21)$$

# 3 Literature Review

This chapter presents a theoretical overview of the study to establish an understanding on the topic.

## 3.1 Financial Statement Analysis

According to Periasamy (2010), financial statement analysis refers to the process of assessing the relation between the elements of a financial report to gain insights regarding the company's position and financial performance. The facts and values in the financial reports can be changed into meaningful and practical figures through analysis and interpretation that provides significant information to owners, investors, shareholders or users of financial reports to make meaningful business decisions. Most financial statement analysis is aimed at assessing a company's profitability and risk. As discussed by Wahlen et al. (2014), the dual focus deals with the importance of business decisions on risk and return in investment decisions. Investors buy common stock in a company based on the expected returns from an investment. This returns incorporate dividends gained including the change in the market price of the stock while it is held by the investors.

Moreover, financial statements also help assess a company's risk. Studies such as Friedlob and Schleifer (2003) have shown that reported revenue volatility correlates with stock market-based measurements of corporate risk, such as market equity beta. Additionally, companies that are unable to generate sufficient cash flow from their businesses can experience financial troubles and even bankruptcy. Companies with a high proportion of debt in their capital structure will face financial difficulties if they are unable to repay their liabilities on time or replace their maturity debt with new debt. Determining a company's financial risk helps investors identify the level of risk associated with investing in the company's common stock. Thus, preparing financial statement analysis significant.

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## 3.2 **Roles of Financial Analysis**

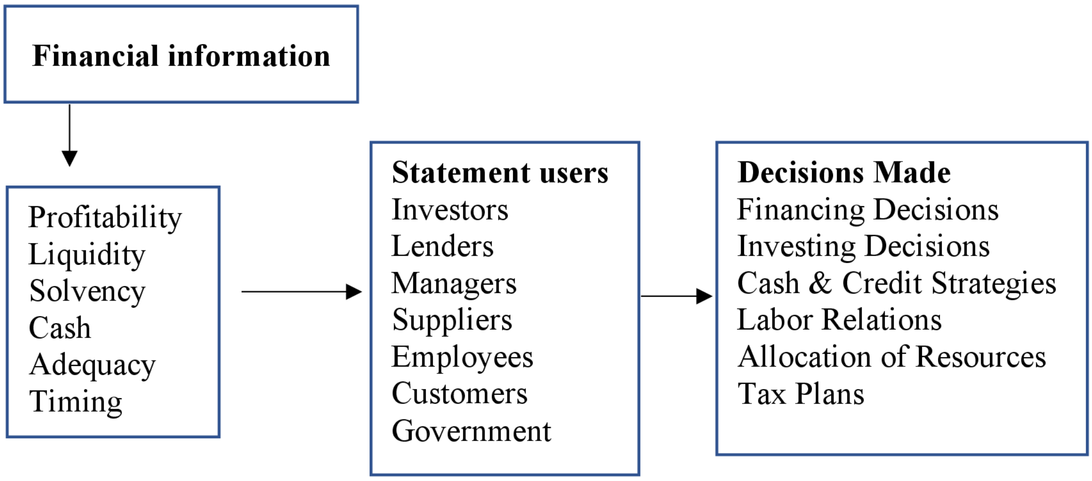
Every firm's concern is to understand different financial aspects in order to make effective decisions (Bragg, 2007). Accordingly, preparation of financial statements is important. One must review company's operations, assess investments, report issues, and provide recommendations to management. Financial analysis, which refers to the ongoing assessment of continuous operations, requires a lot of judgement about the applicability of a particular action, and a great deal of work to communicate the results to management.

Furthermore, the methods of financial statement analysis (Wahlen et al., 2014) are valuable to other decision-making. Firstly, it is valuable in running a business and communicating the results to investors, creditors, employees, and stakeholders. Second, it can be used in assessing credit ratings or extending credit for short-term or long-term loans. Third, it can be used in assessment of the performance and financial condition of a supplier, customer, competitor, or potential employer. Additionally, it is also essential in evaluating companies for potential sales, mergers, or acquisitions. Lastly, when evaluating the IPO of a company's stock.

## 3.3 **Users of Financial Information**

Thakur (2020) defined user of financial information as a person who reads the firm's financial statements as it has a direct or indirect interest in the company, also known as stakeholders. They can be categorized as an internal or external user. Internal users are part of the company's management team, for instance managers and other professionals in the company. On the other hand, external users are outsiders of the company but have some interest in the company such as shareholders, lenders, and creditors.

*Figure 1. Financial Information*




Source: Vera Cruz-Manuel (2015)

Thakur (2020) mentioned that one of the most important users of financial analysis is the owner or the investors of the company. The owner is the one who puts in the capital such as money or property to a business venture. An owner must review the financial report to lessen the risk of losing money. This allows them to have an insight if the business is profitable and if it has adequate funds to remain stable. Second, managers are the ones who is running the business (Vera Cruz-Manuel, 2015). They are one of the users of financial statements because it allows them to evaluate the performance of the company whether the plans are valuable to the business and whether its decisions are impacting the company's profit as a losing business can indicate an inefficient management.

Another user of financial reports are lenders or creditors as per Thakur (2020) The lenders are the ones who loans money to organizations, for instance banks and financial institutions. Creditors assess the balance sheet of a company before providing the loan to the firm to know whether the company can repay the funds in time. They require financial reports and projected financials to see if their debts are secured and to know their risks. They check whether the company has liquid assets. Following that, vendors also use financial reports (Vera Cruz-Manuel, 2015). A vendor is a supplier that provides a company with the raw materials and other products that company needs for its daily work. They provide goods or materials on cash basis or on credit. Suppliers also needs to check the repayment ability of a company that sells the item.

Similarly, customers also determine the firm's ability to continually provide the goods they require with the right price and quality (Vera Cruz-Manuel, 2015). Thereafter, employees are the people who are hired by a company and receives a salary in return. They are interested in the financial situation of the company to know whether the company can pay their wages and the security of their tenure. Lastly, the government, particularly are those in the tax agencies which are interested in the financial situation of the company for tax and other regulatory purposes. All businesses are obliged to pay their tax to authorities. Therefore, the amount of tax paid will be calculated after the financial statements are prepared.

## 3.4 Financial Statements

### 3.4.1 Statement of Financial Position

Statement of financial position or also known as balance sheet shows the summary of what the company owns, such as its assets, and what it owes, liabilities, and owner's equity (Gitman, 2006). The company's assets are balance with its liabilities and equity. The assets part of the statement of financial position presents the impacts of the company's operating decision which involves daily activities that produces and delivers goods or services to consumers. This mainly comprises of financial assets that could generate interest, profit, dividends, and other return on investment. The liabilities and equity part of the statement of financial position presents the debts that derived from the company's operating decisions such as its obligations to employees, suppliers, or other lenders (Wahlen et al, 2014).

### 3.4.2 Statement of Income

The statement of income or also known as profit or loss statement presents the financial performance of the company (Wahlen et al, 2014). It reports the lists of revenues earned and the costs incurred by the firm. Net income is equal to income and profit minus costs and losses. Revenue measures the inflow of assets and the settlement of obligations from the sale of goods and the provision of services to customers. Expenses are the outflow of assets consumed by a company and the commitment it makes in the process of operating the company to generate profit.

Profit and losses stem from the sale of assets or the settlement of liabilities (Gitman, 2006). When gains exceed costs, a favorable outcome occurs, such as profit, which increases the net value of the company. However, if the cost exceeds the income, a loss will occur. Losses reduce the company's assets and consequently, reduces its net worth. Profit maintains the life of the business, it sustains financial strength and becomes the basis of tax, salaries, and bonuses.

### 3.4.3 Statement of Cash Flows

According to Gitman (2006), a cash flow statement is a summary of the cash that comes in and out for that period. The purpose of the statement of cash flow is important because it is used to provide information to users regarding the sources and uses of cash. It shows how cash is affected by the three business activities such as operating, investing, and financing operations of the firm. It helps determine the company's ability to generate or maintain cash and ensure that there is enough cash for business to operate.

The first business activity is operating activities (Wahlen et al, 2014). This refers to revenue collections and payment for expenses. Secondly, investing activities which relates to acquisition of long-term assets, especially property, plant, and equipment. It usually involves the continued us of large amounts of cash. It is necessary for companies to invest in new equipment and machinery in order to expand their business. Inflows of cash also happen when there is sale of securities, plant, property, or equipment. Lastly, financing activities. This refers to loans extended by creditors or contribution of investors. Additionally, outflows of cash occurs when cash is paid to creditors or withdrawn by investors.

### 3.4.4 Statement of Retained Earnings

As discussed by Periasamy (2010), the statement of retained earnings or also known as statement of changes in equity presents the changes in the company's wealth. It reconciles the beginning and ending balances of a firm's equity in a reporting period. This statement is interconnected with the income statement and the statement of financial position. The accumulated excess of earning over losses and dividend is considered as retained earnings.

The balance of retained earnings is presented in the income statement is then moved to the liability side of the statement of financial position. There are four actives that impact's the company's equity such as investment, withdrawal, profit or loss. Investment and profit increases the equity while withdrawals and loss decreases the owner's equity.

## 3.5 Methods of Financial Analysis

Different tools are utilized to assess the financial performance of a company. Three of the widely recognized tools are as follows:

### 3.5.1 Horizontal analysis

It is also known as Dynamic Analysis. It refers to comparison of trend in each figure in the financial report over a period of time. This kind of correlation assists with recognizing the pattern shown horizontally from one year to another (Friedlob and Schleifer, 2003).

### 3.5.2 Vertical analysis

is also referred to as Static Analysis. It focuses on various proportions utilized for estimating the significant quantitative connection between the figures in the financial report during a specific time frame. This kind of analysis is useful in comparing the performance, productivity and profitability of a company (Gitman, 2006).

### 3.5.3 Ratio analysis

refers to the process of calculating and interpreting financial ratios to assess and control the company's performance (Friedlob and Schleifer, 2003). The essential data required are the company's income statement and balance sheet. There are five fundamental categories of financial ratios such as liquidity, activity, debt and profitability.

3.5.3.1 **Liquidity Ratio**

The liquidity indicator (Carlon, S. *et al.*, 2016) measures the short-term capacity of a company to pay its debts when it expires and meet unexpected liquidity needs. In particular, short-term creditors such as banks and suppliers are interested in evaluating liquidity. According to Friedlob and Schleifer (2003) metrics can be utilized to assess the short-term solvency of a business are the current ratio, quick ratio, and inventory turnover which are described below.

a. Current Ratio

   One of the most frequently cited financial ratios, the current ratio, measures a company's capacity to meet its short-term obligations. In general, the higher the current ratio, the more liquid the company is. It is estimated by dividing the firm's current assets by its current liabilities.

b. Quick Ratio

   The quick ratio or also known as the acid test is measured by dividing the company's current assets minus inventory by its current liabilities. In general, low liquidity is related to two main factors such as inventory cannot be easily sold and second, inventory is sold by credit. Thus, a quick ratio of 1.0 or above is acceptable.

3.5.3.2 **Activity Ratio**

Activity ratio (Friedlob and Schleifer, 2003) pertains to the rate at which different accounts are transformed into income or cash-inflow or outflows. In terms of current accounts, estimating the liquidity are commonly insufficient due to the fact that the differences in the structure of the current assets and current liabilities have an effect on its true liquidity. Hence, it is important to pay particular attention further measures of overall liquidity to determine the activity of specific current accounts. A range of ratios are available for assessing the activity of the current accounts such as inventory, accounts receivable and accounts payable as per (Gitman, 2006).

a. Inventory turnover

Inventory turnover assesses the activity, liquidity of the company's inventory which is measured by dividing the cost of goods sold by the average inventory value.

b. Total asset turnover

Total asset turnover presents the adequacy in which the company utilizes its assets to generate sales. It is measured by dividing sales by the total assets.

3.5.3.3 **Debt Ratio**

Debt ratio (Carlon *et al.*, 2016) measures a company's ability to survive in a duration of a long period of time. Long-term creditors and shareholders are interested in the company's ability to pay long-term, especially their capability to pay interest when its due. The ratio of debt to total assets, the amount of interest earned, and the coverage of cash debt gives information on the company's solvency.

a. Debt Ratio

The debt ratio measures the rate at which the total assets are financed by the company's liabilities. As per (Gitman, 2006), the higher the ratio, the greater the number of investments is being used to produce profits. The higher this proportion, the greater the company's degree of indebtedness and the higher financial leverage it has.

b. Times Interest Earned Ratio

The times interest earned ratio or also known as the interest coverage ratio assesses a company's capability to achieve contractual interest payments. According to Gitman (2006), the higher the ratio, the better the company can pay its interest obligations. The interest earned ratio is measured by dividing the earnings before interest and taxes over interest. The ratio of at least 3.0 and closer to 5.0 is considered acceptable.

3.5.3.4 **Profitability Ratio**

Profitability indicator (Carlon, S. *et al.*, 2016) measures a company's profit over a particular period of time. A company's earnings or losses affect its ability to acquire debt and equity finance, its liquidity position, and its capacity to expand. Thus, creditors and investors are equally interested in assessing the company's profitability. It is often utilised as the preeminent test of management efficiency.

a. Gross Profit Margin

   Gross profit margin (Gitman, 2006) determines the percentage of sales per dollar the remains after the company pays for its products and services. The higher the ratio, the better it is for the form that is if the cost of sales is low.

b. Operating Profit Margin

   Operating profit margin (Gitman, 2006) estimates the proportion of sales per dollar after deducting all the expenses excluding interest, taxes and preferred stock dividends. This pertains to the pure profits received from each sale of product or services. It is preferred to have a high operating margin.

c. Net Profit Margin

   Net profit margin (Gitman, 2006) estimates the proportion of sales per dollar that remains after deducting all costs and expenses as well as interest, taxes and preferred stock dividends. The greater the company's net profit margin, the better the results. The net profit margin is usually quoted as the measure of a company's success in terms of its earnings on sale.

d. Earnings per Share (EPS)

   A company's earnings per share or EPS (Gitman, 2006) is usually important to current and future shareholders. It is measured by calculating the earnings available for common stockholders by the number of shares of common stock outstanding.

e. Return on Total Assets (ROA)

Return on Assets or also known as the return on investment (Gitman, 2006) estimates the total effectiveness of management in obtaining profits from available assets. Consequently, the higher the return on assets of a company, the greater it is for the company. This is calculated by dividing earnings available for common stockholders by total assets.

f. Return on Common Equity (ROE)

The return on common equity measures the profit generated from the investment of ordinary shareholders in a company. In general, the higher the return, the higher the profit of the owner. The return on equity capital is measured by dividing the earnings available for common stockholders over the common stock equity (Gitman, 2006).

### 3.5.4 **DuPont Analysis**

DuPont's analysis system (Gitman, 2006) is utilised to analyze the financial statement of a firm and evaluate their financial position. It incorporates two financial statements such as the income statement and balance sheet into two summary of profitability metrics, Return on Assets (ROA) and Return on Common Equity (ROE). The DuPont system combines the net profit margin, which assesses the profitability on sales along with the total asset turnover which presents how efficiently the company has utilized its assets to produce sales. The DuPont's analysis allows companies to classify revenue into profit-on-sales and asset utilization efficiency. Companies with low net returns have high total asset turnover, resulting in significantly higher return on assets.

### 3.5.5 **Altman's Z-score**

Z-score bankruptcy prediction model (Chouhan et al., 2014) was developed by Edward Altman in 1968. A distress prediction model or also known as credit score model can be helpful for financial statement users who have financial reports but do not have access to internal information of the firm. As mentioned by Friedlob and Schleifer (2003), if the value of Z scores below 1.81 then a bankruptcy might be forecasted. On the other hand, if the value of Z is between the levels of 1.81 and 2.99 then the company is in the gray area. He determined the intercept of Z-score (2.99) to categorize healthy and problematic companies. The study presented that the Z-score model demonstrated solid predictive performance one and two years prior financial difficulty, however it does not show good predictive utility three to five years before financial catastrophe.

*Table 2.Critical values of Altman's Model*

| **Score** | **Zone** | **Result** |
|---|---|---|
| Z < 1.81 | Distress | Likely to be bankrupt |
| 1.81 < Z <2.99 | Gray Zone | Stable |
| Z > 2.99 | Safe Zone | Safe |

Source: Chouhan et al. (2014)

## 3.6 **E-commerce**

As defined by Combe (2006), electronic commerce, or also known as e-commerce, is related to the purchase, sale, marketing, and services over a computer network. Jain et al. (2021) also defined this as electronic media and the internet for trading goods and services. In e-commerce, businesses access both the internet and information technology such as electronic data interchange (EDI). E-commerce involves the websites of internet providers that sell goods and services directly from the platform to users.

The Web (Jain et al., 2021) has been the driver for major changes in the business environment as more companies incorporate their conventional business models with those of the internet. With the proliferation of the Information and Communication Technologies (ICT), the world is rapidly promoting e-commerce (business-to-business). The internet encourages consumers to enter the global economy, allowing consumers to compare prices in different countries, reviews on their products and find alternatives.

In the mid 1990s are the time where companies that are born on the internet rise up whose mission was to take advantage of market opportunities over the internet. Amazon.com (Combe, 2006) is a good example of a known e-commerce company in the world. It was first in the market to commercialize an online bookstore business in 1994. As a result, the company has grown rapidly to offer a great number of goods and services. Although, in the beginning Amazon.com have been recording a loss for few years before it became the most valuable company in the world.

## 3.7 **History of Amazon**

Amazon was founded on 5$^{th}$ of July 1994 from Jeff Bezos's garage in Seattle. In the beginning, the company's name started as Cadabra Inc. when it was registered in Washington State in 1994. People would associate the name with Cadaver that later they planned to change it. It was then renamed after the largest river in the world, Amazon, which also suggests as the Earth's largest bookstore (Stone, 2013). It started as an online bookstore which only competed with local bookstores and one of the most known booksellers, Barnes & Noble.

In the year of 1996, Amazon (2002) launched Amazon.com Associates Program which is an affiliate marketing program that help members to earn up to 15 per cent for sales brought from referred customers once they click the link and purchased products from Amazon.

Consequently, Amazon (Kawamoto, 1997) had its initial public offering (IPO) at $18 in 1997. It raised $54 million that made the company market value of $438 million in 1997. Following that year, Amazon has expanded its business from books to music and DVD sales. It also acquired Internet Movie Database, (Sherman, 2015) an online database that provides information regarding movies, television programs and home videos. Additionally, Amazon purchased Jungle Corporation, a database technology that allows customers to easily find products online. It allowed Amazon to have a more efficient shopping experience which serve as a launching platform to other countries later.

By the end of 1999, Amazon had dispatched 20 million products to 150 nations all over the world. Additionally, that year, Bezos (Reuters, 1999) was named as the Person of the Year in Time's magazine. The following year, the organization presented a service permitting other venders and external retailers to sell their products on the website beside only Amazon's products. It also began marketing camera related products and started affiliation with Toys 'R' Us and introduced free shipping on orders above $100.

By 2002, Amazon (Amazon.com, 2002) entered the market of cloud computing such as Amazon Web Services. Amazon Web Services offers an innovative Web solutions and services for web site proprietors and developers. This help developers create applications and tools that will permit them to integrate the remarkable elements of Amazon.com into their sites without any fee.

By 2003 (Hansell, 2004), Amazon earned $35 million in profits, its first full-year profit after losing $149 million in 2002. Two years later, Amazon launched Amazon Prime, a subscription service program that allows next day delivery and allows members to have unlimited access to a variety of movies and TV episodes. In the same year, Amazon introduced Amazon Mechanical Turk, an Application Programming Interface (API), which helps individuals and businesses with outsourcing processes and tasks over the internet. This gives customers increase flexibility, efficiency while reducing costs. In 2006, Amazon introduced Amazon Elastic Compute Cloud (EC2) is a web service that gives resizable register limit in the cloud. It is intended to make web-scale computing simpler for web designers. It allows users to utilize the Amazon framework to run their applications.

By 2007, Amazon launched its Kindle e-book reader. Kindle e-books showed significant sales outnumbering hardcover books (Miller, 2010). Amazon has also introduced its self-publishing services with Kindle Direct Publishing which opened a whole new industry. Kindle Direct Publishing provided opportunity for authors to publish their own e-books which in return they receive 70 per cent of the royalties from the sale of the e-book and rights remain on their control. Amazon began selling more e-books than physical books in 2011. Following years later, by 2017, Amazon share of the US e-book market is 83 per cent (Wells. Et al, 2018).

Amazon continued expanding into different products and establishing its place in different segments including clothing, footwear and groceries. In 2006 (Wells. Et al, 2018), it entered the market of grocery business when it opened Amazon Grocery then introduced AmazonFresh which offered grocery deliveries. In 2007, it introduced its footwear and handbag website, Endless. In 2009, Amazon purchased Zappos, a leading online apparel and shoes store which provides consumers a wide range of selection (Maestri, 2009).

In 2012 (Rusli, 2012), Amazon announced its acquisition of Kiva Systems, a robotics company that produces robots for service warehouses. This increases Amazon's productivity with Kiva's technology that are used in fulfillment centers to regulate their inventory and to fill orders. A year later, Amazon (Weissmann, 2013) acquired more business such as Good Reads, a social network for users to input reviews and catalogue of books they want to read. A database of books and book reviews is an advantage for Amazon since it can reduce competition while obtaining data and systems from Good Reads.

In 2014, Amazon bought Twitch, a leading streaming website for gamers. Twitch is a website for gamers to stream their video games while earning money from it. It gained 15 million daily users in 2017 (Wells. Et al, 2018).

In 2017, Amazon bought Whole Foods Market for $13.7 billion. Following the news, Whole Foods Market's competitor, Walmart and Kroger stock price dropped. Whole Foods has 460 stores in the United States (Wells. Et al, 2018).

## 3.8 **First-mover advantage**

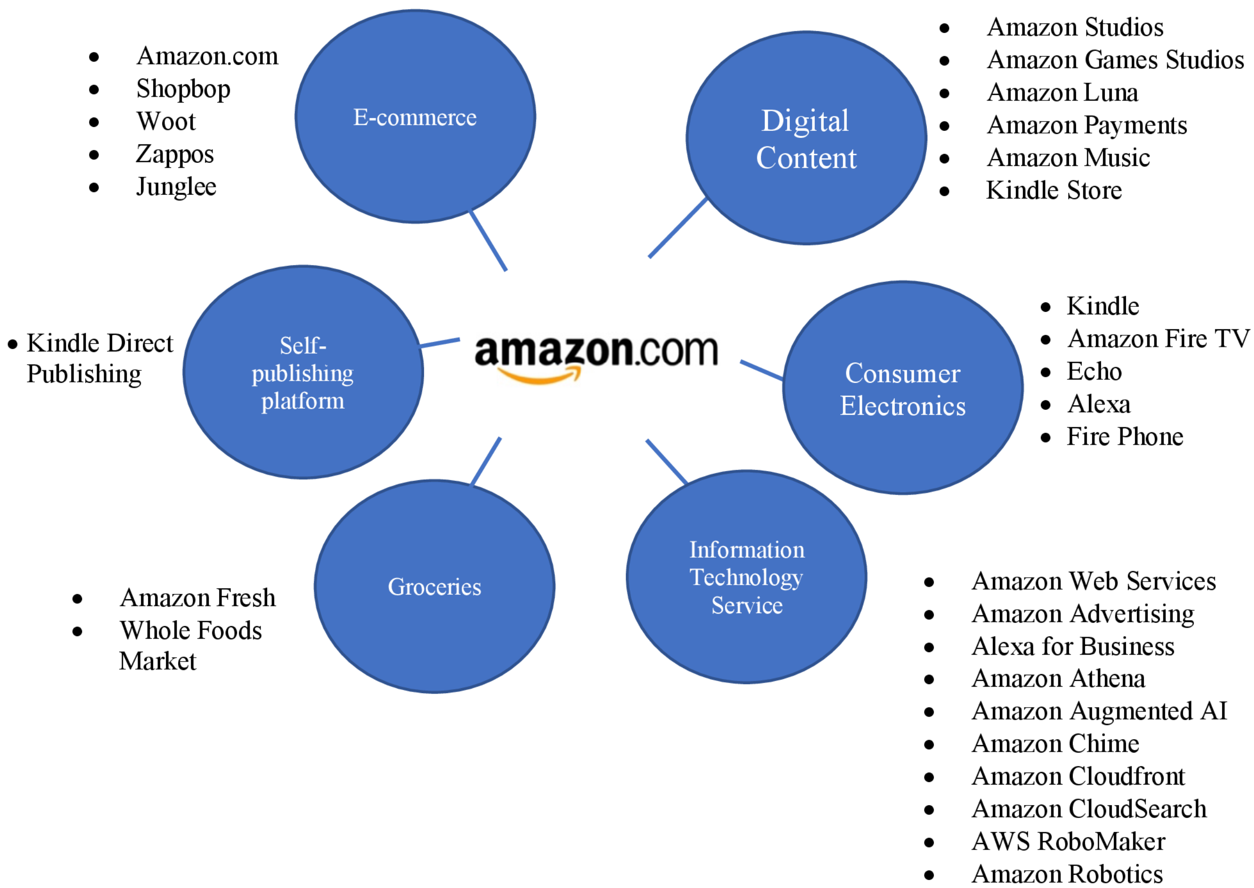
Amazon has been known to be a first mover in the commerce world (Combe, 2006). It has allowed the company to accumulate tremendous market value. As Amazon has started from being an online bookseller it has expanded its services to selling variety of merchandise. One of its valuable assets is the digital software it has designed to increase its customer value through database management. The company's core competence can be observed in its value-added customer service provided by the software and leveraged by Amazon's competent staff. An important pioneer advantage of Amazon.com is the advancement of its network externalities. It is one of e-commerce companies that have established business models based on the idea of creating communities virtually, auctions on the internet, harmonize value chains and other developments (Newman, 2018). As the community grows, information services have continued to expand, making participation more attractive and costs still remains the same.

Since Amazon.com has started, it has continued its monopoly in the market from 1995 to 1997, it has built its base to a bigger and loyal customer reach that competitor had to overcome. Its branding and customer loyalty are the important key factors relating to its competitive advantage that has brought Amazon.com to where it is now. Its digital technology has also contributed to maintaining a competitive advantage in the market of intensifying competition in the online book retail industry as per Ives etal. (2019). It has spent a very long time, including legal proceedings, to maintain the company's software technology development from its impersonators.

## 3.9 **Diversification strategy**

Following the history of Amazon, they have been consistent in maintaining their strategy of growing quickly (Combe, 2006). Amazon is a pioneer in online transactions and the largest retailer in the world. It started as an online bookstore but soon diversified into selling anything and everything online. In addition, Amazon has slowly but undoubtedly expanded around the globe and is now operating worldwide through different logistics and international deliveries. Its success can be derived from its competitiveness and its growth due to its aggressive growth strategy. As seen in the history of Amazon, it has expanded the variety of services provided to clients through technological innovations or acquisitions. As figure 2 below shows, how Amazon has expanded from online bookselling to videos, CDs, gifts, toys, healthcare products, gardening equipment, electronic equipment, digital products, web services, cloud services and more.

*Figure 2. Amazon Products and Services*




Source: Stone (2013)

Amazon.com also have bought technology companies that offered specific capabilities that Bezos presumed cannot be developed internally (Combe, 2006). Exchange.com (www.exchange.com) sustained a bibliographic dataset contains roughly ten million rare books. These included a database of numerous independent distributors and retailers. Amazon.com acquired Alexa Internet (www.alexainternet.com) a company that specializes in the collection of Web navigation app. Accept.com (www.Accept.com), a Web start-up enterprise led by a former Netscape employees that specialize in advanced technologies for online transactions, was purchased as a third acquisition.

Other than books, Amazon.com has venture into new product development and market sectors. Product development is a key growth strategy for the corporation as it attempts to maintain its market leadership in ecommerce through technology innovation. The business now has online websites for products relating to health care to lawn and garden tools. Amazon.com has also continued to expand geographically, invest in new ventures in Europe and Japan. The company plans to expand through acquisitions and alliances with internet and entertainment companies.

As can be seen in figure 2, information technology ranges from Amazon Web Services, Amazon advertising, Alexa for Business, Amazon Athena, Amazon Augmented AI, Amazon Chime, Amazon Cloudfront, Amazon CloudSearch, AWS RoboMaker and Amazon Robotics. They have entered the business of Artificial Intelligence and technology. Cost savings and efficiency gains have also been realized by automating and controlling functions such as order processing, warehousing, logistics, and distribution with software applications (Combe, 2006). Not only that but also, they offer these services to other businesses that also generates them profit.

### 3.9.1 **Amazon Web Services (AWS)**

Amazon (2020) is a well-known e-commerce and Amazon Web Service (AWS) provider. The enterprise AWS services encompass cloud, Artificial Intelligence (AI) and device learning (ML) associated services whilst its online retail platform offers fashion, electric and electronics, books, entertainment, hobbies, car and commercial items, health, and sports activities goods. Its improvements in AI enhance the enterprise AWS commercial enterprise services and beautify its online platform browser and platform compatibility, and purchaser service.

According to Amazon (2022), AI allows the enterprise to supply customized product guidelines to particular clients primarily based totally on preceding searches, enhance search engine competencies which include allowing inquiry through pictures or language that are conversational, enhance browser loading time, decrease order placement time, and oversee purchaser interactions. The enterprise's AWS cloud database shops and administer massive records associated with its e-retail activities offering suitable guidelines to clients primarily based totally on consumers past activities. It additionally allows the firm to enhance the amount of particular site visitors on a day and orders in a particular hour (Ives etal., 2019).

### 3.9.2 **Amazon Inventory System**

Amazon’s innovative and highly efficient supply chain is one of the driving forces behind that transformation. Amazon's ongoing efforts to bring products to customers in the shortest period of time are placing massive pressure on other retail business powerhouses around the world and, as a result, changing the way logistics management works (Leblanc, 2020). With a combination of advanced information technology, extensive warehousing network, multi-level inventory management, and outstanding transportation, Amazon’s supply chain is the most efficient of the world’s leading companies. This efficiency has enabled the world of today can shop from home.

As Leblanc (2020) cites that Amazon’s supply chain relies mainly on inventory management by outsourcing it. Items that are rarely ordered are not in the stock of their own regular Amazon warehouse but rather from its third-party sellers which accounts a large portion of source of their income. Additionally, Amazon offers two hour or same-day delivery. Hence, Amazon is well aware that relying on third-party logistics to deliver these orders will only increase the delivery time of the time item. For this reason, Amazon primarily uses its own delivery vehicle for same-day or one-hour service.

Furthermore, Amazon has bought an automated robot storage solutions in 2012 namely Kiva Systems (Rusli, 2012). Three years later Amazon renamed the company to Amazon Robotics. This helped Amazon in picking and packing without human labor. Allowing Amazon to complete warehouse processes tremendously quick. Consequently, Amazon has increased its warehouse robots by 35,000 annually since the year 2015. As of 2020, Amazon owns more than 45,000 robots in the warehouse.

In view of the huge economies of scale and industry-leading supply chain strategies, Amazon was able to minimize total costs per delivery unit. This leads to sales volume decreasing, and it would be challenging for other firms with only their own inventory to compete with (Leblanc, 2020).

# 4 Practical Part

This chapter of the study consists of brief company background of Amazon and practical application of the financial analysis of Amazon's financial statements.

## 4.1 Company Background

Amazon.com, Inc was founded by Jeff Bezos, previous vice president of D. E Shaw & Co., a global investment management firm (Martin, 2017). From an online bookstore to an online marketplace for electronics, software, video games, apparel, furniture, food, and beyond its business. It is now one of the most valuable company in the world (Hanbury, 2019). In 2021, Amazon ranked second after Walmart in Fortune 500. Amazon's revenue growth was 38% in 2020. As the COVID19 pandemic hit the world, it forced companies to put their business online and Amazon was able to put it into its advantage. Its Prime delivery and entertainment services grew and brought 50 million subscribers year after year which gained more than 200 million customers all over the world (Fortune, 2021).

Amazon has expanded its business beyond its e-commerce which is only a portion of its revenue. It has diversified its business into different sectors by developing technologies. It has invested in several businesses such as self-driving car company Rivian, downloads and streaming services, Cloud computing services, home hardware and digital advertising (Handbury, 2019). It produces customer gadgets such as Kindle tablets, Fire tablets, Fire TV, and Echo gadgets. Moreover, it has acquired several businesses such as Ring, Twitch, Whole Foods grocery and IMDb. Its market value as of March 2021 was $1,558,096.6 million with a revenue of $386,064 million in 2020. It was included in Forbes (2021) list of Global 2000 as number 2 in sales and 4 in World's Most Valuable Brands 2020. It was also ranked as second's World Best Employers of 2020 and fifth on World's Most Innovative Companies in 2018.

## 4.2 **Amazon’s Total Net Sales**

Following the data gathering, a chart is presented below to show the growth of total net sales of Amazon from the year 2016 to 2020.

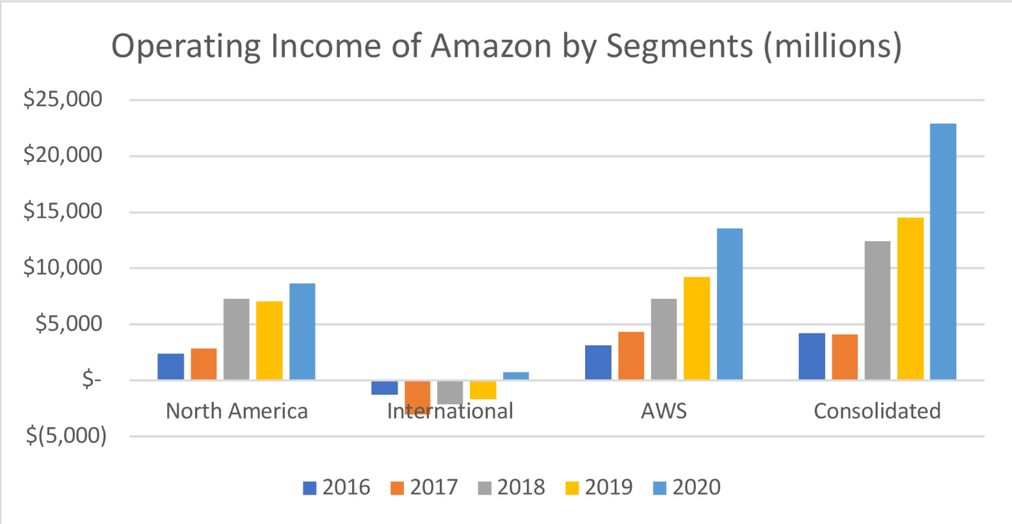
*Figure 3. Amazon's Net Sales*


Source: Amazon Annual Reports

Net sales encompasses product and service sales. According to Amazon Annual Reports (2020), product sales incorporates sales from the sale of merchandise and associated delivery costs and content management wherein it is recorded as revenue gross. Service sales includes associated transport fees, AWS income, other digital content subscriptions, advertising services and fess from third-party sellers which also includes commission. Memberships from Amazon prime are allotted among sales from products and services and amortized over the life of membership depending on the approximate sales of delivery. As presented above, net sales of Amazon in 2016 and 2017 were 135,987 million and 177, 866 million respectively. By the year 2019, it only increased by 20 percent, 11 percent lower than the previous year. Finally, in the year 2020 when the global pandemic happened it rose by 38 percent which is 386,064 million dollars in value.

## 4.3 **Amazon's Business Segments**

*Figure 4. Amazon's Operating Income by Segments*




Source: Amazon Annual Reports

*Table 3. Operating Income*

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Operating Income (Loss): | | | | | |
| North America | $ 2,361 | $ 2,837 | $ 7,267 | $ 7,033 | $ 8,651 |
| International | (1,283) | (3,062) | (2,142) | (1,693) | 717 |
| AWS | 3,108 | 4,331 | 7,296 | 9,201 | 13,531 |
| **Consolidated** | $ 4,186 | $ 4,106 | $ 12,421 | $ 14,541 | $ 22,899 |

Amazon's operating income can be divided into three categories such as North America, International and Amazon Web Services (AWS). As presented in table 3 above, operating in North America has continuously grew since 2016 to 2018 when it increased more than twice its previous year and continued to increase to $8 billion during the year 2020. On the other hand, for international operating income Amazon has experienced continuous losses until the year 2020 when it earned an operating income of $717 million. Following that, Amazon has earned significant income from AWS. Amazon's operating income increased from $3 billion in 2016 to $13 billion in 2020 which is twice the income in North America. This segment involves earnings from global sales of computer, storage, database and other services from organizations and government agencies.

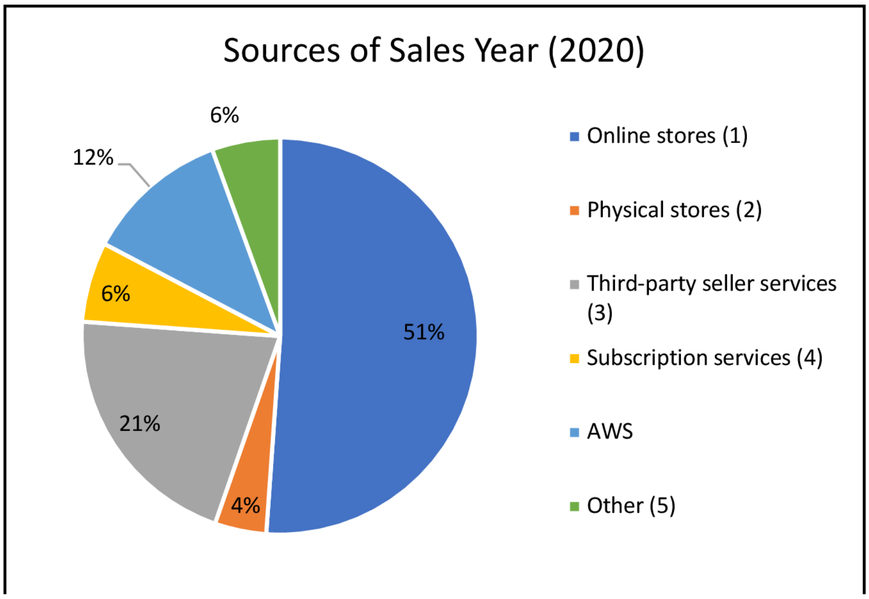
## 4.4 **Amazon’s Sources of Sales**

*Table 4. Amazon’s Sources of Sales*

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Net Sales:** | | | | | |
| Online stores (1) | $ 91,431 | $ 108,354 | $ 122,987 | $ 141,247 | $ 197,346 |
| Physical stores (2) | | 5,798 | 17,224 | 17,192 | 16,227 |
| Third-party seller services (3) | 22,993 | 31,881 | 42,745 | 53,762 | 80,461 |
| Subscription services (4) | 6,394 | 9,721 | 14,168 | 19,210 | 25,207 |
| AWS | 12,219 | 17,459 | 25,655 | 35,026 | 45,370 |
| Other (5) | 2,950 | 4,653 | 10,108 | 14,085 | 21,453 |
| **Consolidated** | $ 135,987 | $ 177,866 | $ 232,887 | $ 280,522 | $ 386,064 |

Source: Amazon Annual Reports (2020)

*Figure 5. Sources of Sales (2020)*



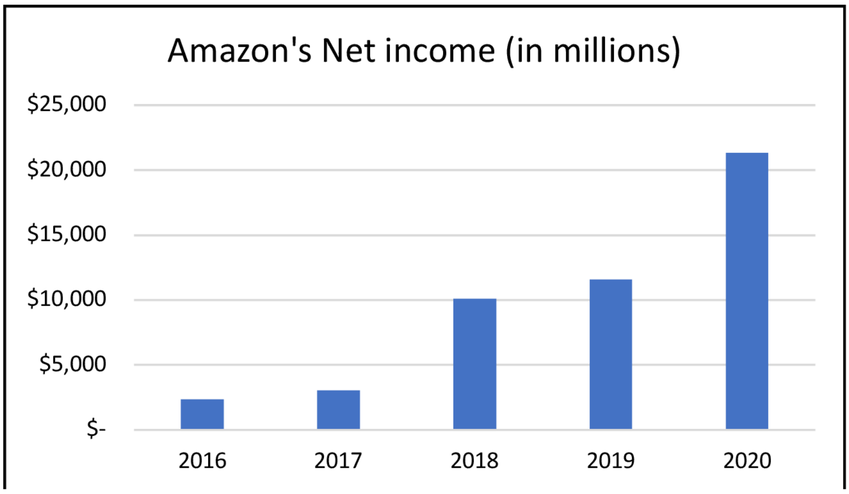

Source: Amazon Annual Reports (2020)

Amazon’s sales are not only from its online stores but also from its business ventures such as its physical stores, third-party seller services, subscription services and AWS. Majority of Amazon’s net sales come from its online stores which is 51 percent of its business. Following that, second large portion of its business comes from its third-party seller services. This includes commissions, shipping fees and other fulfillment fees. Consequently, a significant part of Amazon’s sales is its AWS which incorporates 21 percent of its income. This includes cloud computing services and application programming interface for individuals and businesses. Lastly, subscription services, physical stores and sales from advertisements amounts to 20 percent of its business.

Overall, this shows that Amazon has successfully diversified its income and not only concentrating to its online stores but rather Amazon tries to enter various endeavors.

## 4.5 **Amazon’s Net Income**

*Figure 6. Amazon's Net Income*




Source: Amazon Annual Reports (2020)

Data shows that in 2017 net income increased by 28 percent. Following that year, net sales increased by 232 percent which is more than three times of net income in previous year while in 2019 it only increased by 15 percent. By the year 2020, net sales increased by 84 percent. The increase in net income can be attributed to its increase in sales especially in 2020 when demand for online retail increased due to increased restrictions all over the world. The increase in net income can also be associated with the gain in profits in the international segment of Amazon compared to previous years when it was only incurring a loss. The increase in the international segment made a significant impact in Amazon’s statement of income as can be seen table 3.

## 4.6 **Horizontal Analysis of Amazon's Balance Sheet**

*Table 5. Horizontal Analysis of Balance Sheet*

| ASSETS | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| **Current assets:** | | | | |
| Cash and cash equivalents | 6% | 64% | 87% | 118% |
| Marketable securities | 57% | 43% | 185% | 536% |
| Inventories | 40% | 50% | 79% | 108% |
| Accounts receivable, net and other | 58% | 100% | 150% | 194% |
| **Total current assets** | **31%** | **64%** | **110%** | **190%** |
| Property and equipment, net | 68% | 112% | 150% | 289% |
| Operating leases | | | | |
| Goodwill | 253% | 284% | 290% | 297% |
| Other assets | 88% | 137% | 245% | 382% |
| **Total assets** | **57%** | **95%** | **170%** | **285%** |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | | | |
| Current liabilities: | | | | |
| Accounts payable | 37% | 51% | 86% | 187% |
| Accrued expenses and other | 32% | 72% | 136% | 221% |
| Unearned revenue | 7% | 37% | 72% | 104% |
| **Total current liabilities** | **32%** | **56%** | **100%** | **188%** |
| Long-term lease liabilities | | | | |
| Long-term debt | 222% | 205% | 204% | 314% |
| Other long-term liabilities | 66% | 39% | -3% | 35% |
| Commitments and contingencies (Note 7) | | | | |
| Stockholders' equity: | | | | |
| Preferred stock, $0.01 par value: | | | | |
| Authorized shares - 500 | | | | |
| Issued and outstanding shares - none | | | | |
| Common stock, $0.01 par value: | | | | |
| Authorized shares - 5,000 | | | | |
| Issued shares | | | | |
| Outstanding shares | 0% | 0% | 0% | 0% |
| Treasury stock, at cost | 0% | 0% | 0% | 0% |
| Additional paid-in capital | 24% | 56% | 96% | 149% |
| Accumulated other comprehensive loss | -51% | 5% | 0% | -82% |
| Retained earnings | 76% | 299% | 535% | 969% |
| **Total stockholders' equity** | 44% | 126% | 222% | 384% |
| **Total liabilities and stockholders' equity** | **57%** | **95%** | **170%** | **285%** |

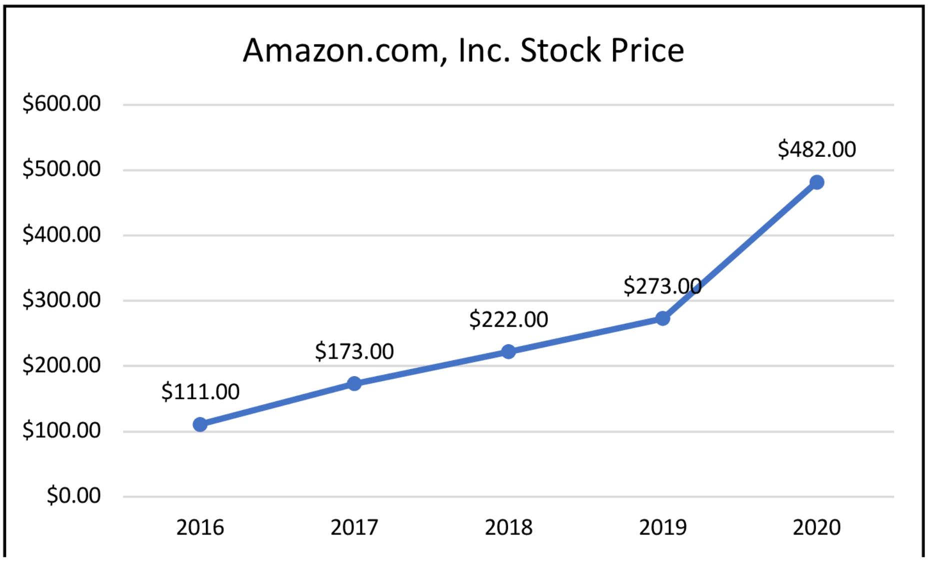
Source: Amazon Annual Reports (2020)

The table above shows the percentage changes in the balance sheet of Amazon during the years 2016 to 2020. As can be seen above, the largest percentage in total assets occurred during 2020 which was an increase of 285%. It can be observed that assets continuously increased during the past five years such as cash and cash equivalents increased from 6% in 2017 to 118% in 2020. Additionally, a significant change in marketable securities can be notice with values of 536% in the year 2020. Overall, total assets continuously increased as it requires more assets and equipment in order to make profit as it can be seen that income increased significantly in the last five years.

Consequently, as assets increased liabilities also increased. It can be seen in the balance sheet that in the year 2020 as significant change has occurred as total current liabilities increased by 188% in 2020. Total current liabilities have continuously increased from the years 2016 to 2020. Not only that but also long-term debt has increased by a high 314% in the year 2020. Likewise, stockholders' equity also continuously increased within the last five years from an increase of 44% in 2016 to 384% in the year 2020.

Further, as can be seen in table 5, Goodwill of Amazon has increased tremendously from the year 2017. Amazon's goodwill increased by 253% from 2017 and continued to increase till 2020 to 297%. This increase in Amazon's goodwill can be attributed to Amazon's acquisition of Whole Foods. As a consequence, Amazon's goodwill exceeded $10 billion for the first time in 2017. Kim (2018) argued that the acquisition price was mostly distributed to its goodwill indicating that Amazon bought Whole Foods primarily as an opportunity to enter the supermarket industry rather than because of Whole Foods existing business. Kim (2018) noted that in the case that the Whole Foods acquisition do not work out Amazon may have to write off the goodwill which could result for Amazon's profits to decline. The balance of high goodwill demonstrates Amazon's confidence to make Whole Foods a big profit driver in the future, although it also has its risks.

*Figure 7. Amazon.com, Inc. Stock Price*




Source: Amazon Annual Reports (2020)

Noe and Weber (2019) cited in their study Amazon's expansion was also due to its acquisitions. For instance, the acquisition of audiobook retailer Audible in 2008 allowed the company to expand its digital media offerings. Similarly, the acquisition of Zappos.com in 2009 allowed the company to expand its share of the shoe, apparel and accessories market. The business went a step further with the acquisition of diapers.com and soap.com owner Qudisi in 2010 and in 2017 when Amazon acquired Whole Foods. It can be noticed in figure 7 that Amazon.com's stock price increased attributed to its further expansions and acquisitions. Investor goodwill is part of the company's valuation process. In fact, Amazon.com had its own investor public relation specialists to communicate with important lenders and investors. Profit attracts more investors and more mutual funds to help the organization reach its goals.

## 4.7 **Vertical Analysis of Amazon's Balance Sheet**

Vertical analysis of Amazon's Balance Sheet was also performed and presented in the table below.

*Table 6. Vertical Analysis of Balance Sheet*

| **ASSETS** | **2016** | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|---|
| **Current assets:** | | | | | |
| Cash and cash equivalents | 23% | 16% | 20% | 16% | 13% |
| Marketable securities | 8% | 8% | 6% | 8% | 13% |
| Inventories | 14% | 12% | 11% | 9% | 7% |
| Accounts receivable, net and other | 10% | 10% | 10% | 9% | 8% |
| **Total current assets** | | | | | |
| Property and equipment, net | 35% | 37% | 38% | 32% | 35% |
| Operating leases | 0% | 0% | 0% | 11% | 12% |
| Goodwill | 5% | 10% | 9% | 7% | 5% |
| Other assets | 6% | 7% | 7% | 7% | 7% |
| **Total assets** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | | | | |
| **Current liabilities:** | | | | | |
| Accounts payable | 30% | 26% | 23% | 21% | 23% |
| Accrued expenses and other | 16% | 14% | 15% | 14% | 14% |
| Unearned revenue | 6% | 4% | 4% | 4% | 3% |
| **Total current liabilities** | | | | | |
| Long-term lease liabilities | 0% | 0% | 6% | 18% | 16% |
| Long-term debt | 9% | 19% | 14% | 10% | 10% |
| Other long-term liabilities | 15% | 16% | 11% | 5% | 5% |
| Commitments and contingencies (Note 7) | | | | | |
| Stockholders' equity: | | | | | |
| Preferred stock, $0.01 par value: | | | | | |
| Authorized shares - 500 | | | | | |
| Issued and outstanding shares - none | | | | | |
| Common stock, $0.01 par value: | | | | | |
| Authorized shares - 5,000 | | | | | |
| Issued shares | | | | | |
| Outstanding shares | | | | | |
| Treasury stock, at cost | -2% | -1% | -1% | -1% | -1% |
| Additional paid-in capital | 21% | 16% | 16% | 15% | 13% |
| Accumulated other comprehensive loss | -1% | 0% | -1% | 0% | 0% |
| Retained earnings | 6% | 7% | 12% | 14% | 16% |
| **Total liabilities and stockholders' equity** | **100%** | **100%** | **100%** | **100%** | **100%** |

Source: Amazon Annual Reports (2020)

Vertical analysis was performed, and results are presented above. According to the results, the largest portion of the assets is related to the property and equipment. This has been consistent within the last five years from 2016 to 2020 wherein values remained from 32% to 38% the highest. Following that, cash and cash equivalents ranked second largest portion in the total assets which decreased in the last five years from 23% to 13% in 2020. It can also be seen that from the year 2019 operating lease increased to 11% and 12 % in 2019 and 2020, respectively from 0 in the past years.

Furthermore, in the liabilities and equity part, it can be seen that the largest portion is the accounts payable values remain from 30% to 21% the lowest in the year 2019. It can be observed that accounts payable are maintained to its lowest. Consequently, accrued expenses is stable as its value remained from 16% to 14% in the last five years. Additionally, second largest portion in the liabilities and equity part is additional paid-in capital which has a decreasing values from 21% in 2016 to continuously decreased to 13% in 2020. This is an important source of capital for the company which can help counterbalance any business losses. Lastly, in 2016 retained earnings was 6% of the liabilities and equity. Following that year, it became 7% of the period. In the year 2020, it has become a bigger portion of the liabilities and equity as it increased to 16% of the liabilities and equity. This is a positive change in the balance sheet as it suggest that earnings has increased within the last year.

## 4.8 **Horizontal Analysis of Amazon's Income Statement**

Horizontal analysis of Amazon's Income Statement was also performed and presented in the table below.

*Table 7. Horizontal Analysis of Income Statement*

| | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| **Total net sales** | **31%** | **71%** | **106%** | **184%** |
| Operating expenses: | | | | |
| **Cost of sales** | 27% | 58% | 88% | 164% |
| Fulfillment | 43% | 93% | 128% | 232% |
| Technology and content | 41% | 79% | 123% | 166% |
| Marketing | 39% | 91% | 161% | 204% |
| General and administrative | 51% | 78% | 114% | 174% |
| Other operating expense (income), net | 28% | 77% | 20% | -145% |
| **Total operating expenses** | **32%** | **67%** | **102%** | **176%** |
| Operating income | -2% | 197% | 247% | 447% |
| Interest income | 102% | 340% | 732% | 455% |
| Interest expense | 75% | 193% | 231% | 240% |
| Other income (expense), net | 284% | -303% | 126% | 2534% |
| **Total non-operating income (expense)** | **2%** | **295%** | **92%** | **-535%** |
| Income before income taxes | -2% | 189% | 259% | 521% |
| Provision for income taxes | -46% | -16% | 67% | 101% |
| Equity-method investment activity, net of tax | -96% | -109% | -85% | -117% |
| **Net income** | **28%** | **325%** | **389%** | **800%** |

Source: Amazon Annual Reports (2020)

As reported above, total net sales have increased substantially in the last five years. Total net sales increased by 31% in 2017 and has increased by 184% in 2020. As a result, cost of sales also increased consistently from 27% in 2016 to 164% in 2020. Total operating expenses also increased continuously within the last five years from 32% to 176% in 2020. Most importantly, net income has increased tremendously from only an 28% increase in 2017, 325% increase in 2018, 389% increase in 2019 to a high 800% increase in 2020. Although there was a fall in operating income in the year 2017, the operating income has increased drastically since then. Amazon earned $ 21,331 million in 2020 which was double the amount in the past year.

## 4.9 **Vertical Analysis of Amazon’s Income Statement**

Vertical analysis of Amazon’s Income Statement was also performed and presented below in the table.

*Table 8. Vertical Analysis of Income Statement*

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Total net sales** | **100%** | **100%** | **100%** | **100%** | **100%** |
| Operating expenses: | | | | | |
| **Cost of sales** | **65%** | **63%** | **60%** | **59%** | **60%** |
| Fulfillment | 13% | 14% | 15% | 14% | 15% |
| Technology and content | 12% | 13% | 12% | 13% | 11% |
| Marketing | 5% | 6% | 6% | 7% | 6% |
| General and administrative | 2% | 2% | 2% | 2% | 2% |
| Other operating expense (income), net | 0% | 0% | 0% | 0% | 0% |
| **Total operating expenses** | **97%** | **98%** | **95%** | **95%** | **94%** |
| Operating income | 3% | 2% | 5% | 5% | 6% |
| Interest income | 0% | 0% | 0% | 0% | 0% |
| Interest expense | 0% | 0% | -1% | -1% | 0% |
| Other income (expense), net | 0% | 0% | 0% | 0% | 1% |
| **Total non-operating income (expense)** | **0%** | **0%** | **0%** | **0%** | **0%** |
| Income before income taxes | 3% | 2% | 5% | 5% | 6% |
| Provision for income taxes | -1% | 0% | -1% | -1% | -1% |
| Equity-method investment activity, net of tax | 0% | 0% | 0% | 0% | 0% |
| **Net income** | **2%** | **2%** | **4%** | **4%** | **6%** |

Source: Amazon Annual Reports (2020)

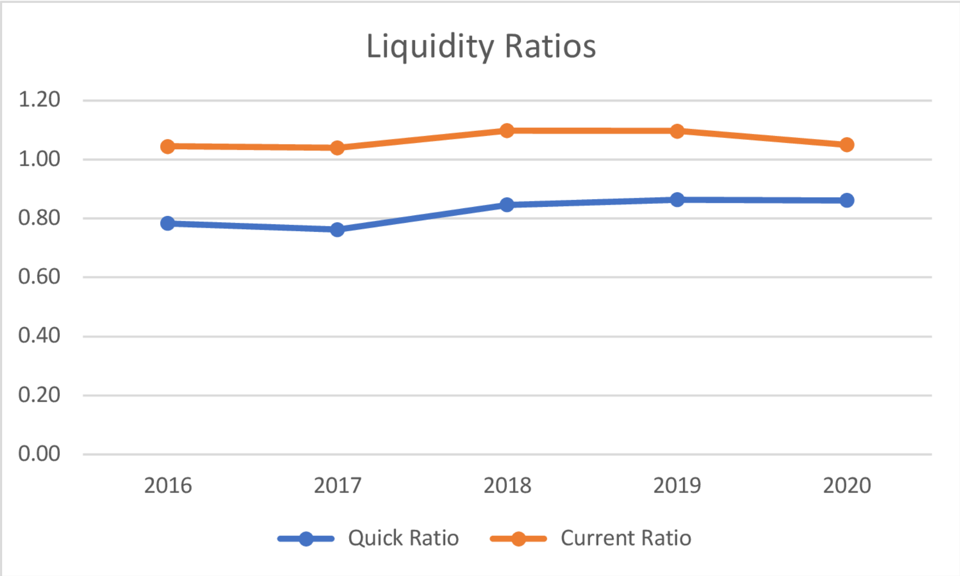
Vertical analysis of Amazons’ income statement revealed that cost of sales as a percentage of total net sales has decreased in the last five years from 65% in 2016 to 60% in 2020. The lowest percentage was seen in the year 2019 which was 59% of total net sales. This reduction in the cost of sales has increased its operating income from 3% in 2016 to 6% the highest in 2020, however it dropped by 1% in 2017. This can be attributed to the increase in the operating expenses in 2017 as there were minimal changes during that year. Additionally, it can be observed that there were no changes in the past five years with interest income, other income or expenses and equity-method investment activity.

## 4.10 Ratio Analysis of Amazon

Ratio analyses are presented below as follows:

### 4.10.1 Liquidity Ratios

*Figure 8. Liquidity Ratios*



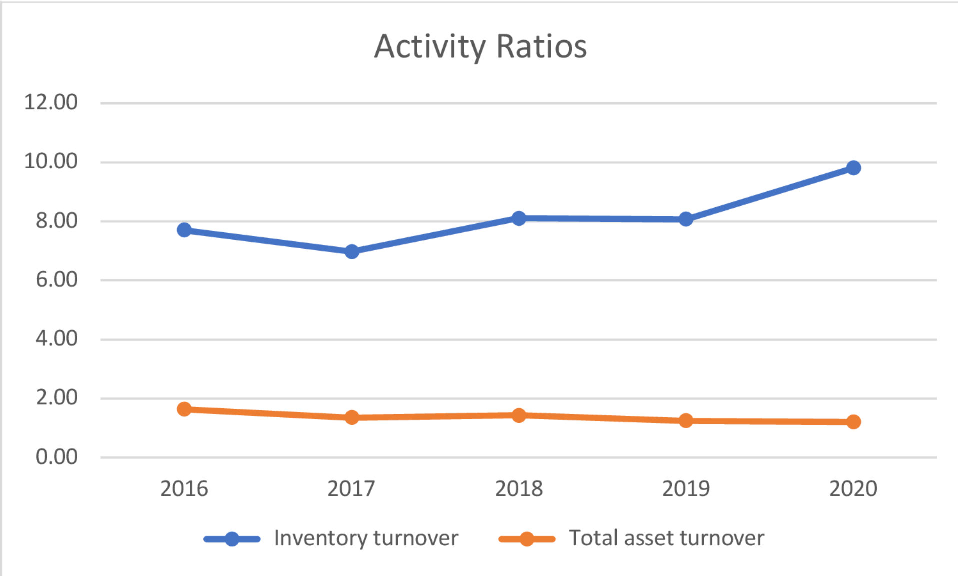

| *Liquidity Ratios* | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Quick Ratio | 0.78 | 0.76 | 0.85 | 0.86 | 0.86 |
| Current Ratio | 1.04 | 1.04 | 1.10 | 1.10 | 1.05 |

Source: Amazon Annual Reports (2020)

The liquidity of Amazon presents a reasonably stable trend except in the year 2020 when current ratio decreased. According to Gitman (2006) the higher the current ratio the more liquid the company is to meet its short-term obligations. This suggest that for every dollar of current liabilities Amazon has $1.04 to $1.10 of current assets. In comparison to industry ratio, Amazon is below the industry average of 1.34. On the other hand, in terms of quick ratio, Amazon has a higher quick ratio compared to the industry average of 0.69 in 2020. Furthermore, quick ratio suggests a positive outcome for Amazon as it remains stable between 0.76 to 0.86. As per Friedlob and Schleifer (2003), a ratio of estimated 1:1 is acceptable. This implies that Amazon has a continual inflow of cash that is sufficient enough to pay its debts when it is due. Overall, Amazon's liquidity ratio is sufficient and in a strong position to repay its short-term liabilities when it is due.

### 4.10.2 Activity Ratios

*Figure 9.Activity Ratios*



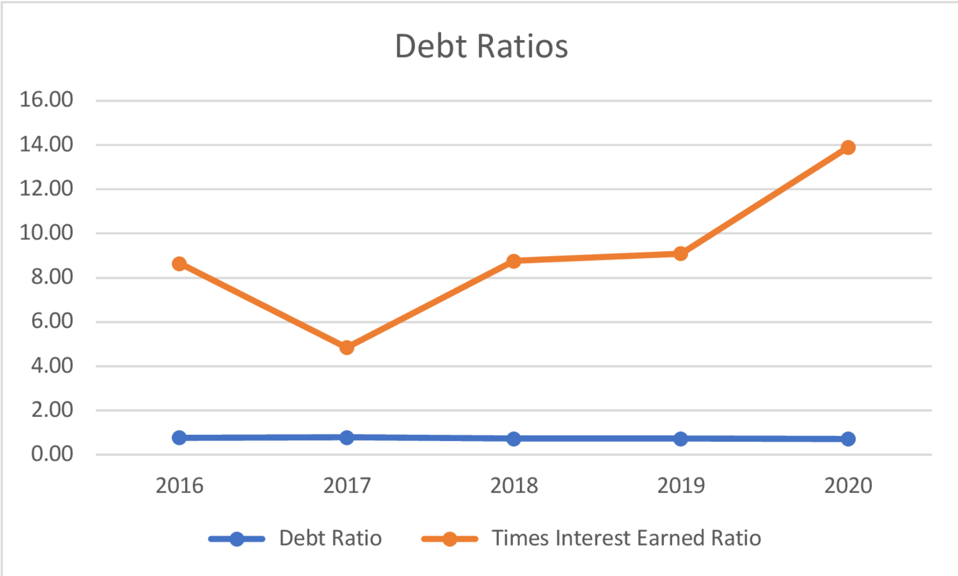

| ***Activity Ratios*** | **2016** | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|---|
| Inventory turnover | 7.70 | 6.98 | 8.10 | 8.08 | 9.80 |
| Total asset turnover | 1.63 | 1.35 | 1.43 | 1.25 | 1.20 |

Source: Amazon Annual Reports (2020)

Amazon's activity ratios are acceptable in comparison to the industry average. Amazon's inventory turnover seems to be in a good shape as it is continuously increasing except for the year 2017 where it dropped to 6.98 and year 2019 with figures of 8.08. Amazon's inventory management seems to be improving as ratios are above that of the industry. Additionally, the total asset turnover fluctuated throughout the years which started from 1.63 then went down in year 2017 and increased a bit in 2018 but fell in 2019 and 2020. Thus, could suggest that there should be improvements that needs to be made in order to maintain a higher total asset turnover ratio. As Gitman (2006) mentioned the higher the total asset turnover suggests an efficient performance of Amazon. The low ratio could imply that excessive amount of capital is restrained in assets and assets might not be taken into its full advantage in generating profit.

### 4.10.3 **Debt Ratios**

*Figure 10. Debt Ratios*



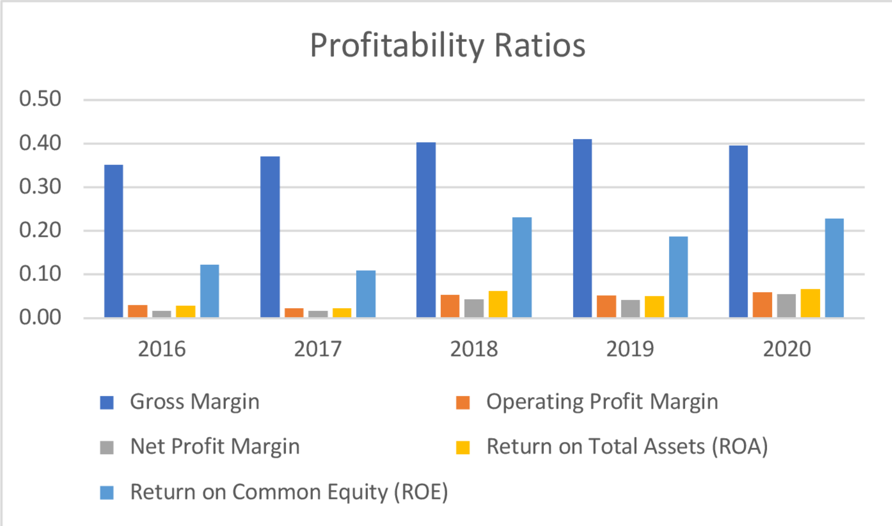

| ***Debt Ratios*** | **2016** | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|---|
| Debt Ratio | 0.77 | 0.79 | 0.73 | 0.72 | 0.71 |
| Times Interest Earned Ratio | 8.65 | 4.84 | 8.77 | 9.09 | 13.90 |

Source: Amazon Annual Reports

According to Friedlob and Schleifer (2003), ratio should not be greater than 1 as it suggests that a significant portion of the debt is financed by the asset. Amazon's debt ratio decreased over 2016-2020 period and is currently below average. Its debt ratio has been consistently ranging from 0.77 to 0.71. It has decreased in the last five years which suggests Amazon's ability to meet interest and long-term obligations improved within 2016 to 2020 in which it performs better than most companies in the industry. Moreover, times interest earned ratio of Amazon seems to be acceptable. Although Amazon's interest coverage has decreased from 8.65 times in 2016 to 4.84 in 2017, it has increased significantly in 2018 to 2020 from 4.84 times to 13.90 times. This means that Amazon can cover its interest expense 13.90 times which is above the general rule of 3-4 times according to financial accounting reporting Gitman (2006). Hence, Amazon has a good margin of safety.

#### 4.10.4 **Profitability Ratios**

*Figure 11. Profitability Ratios*

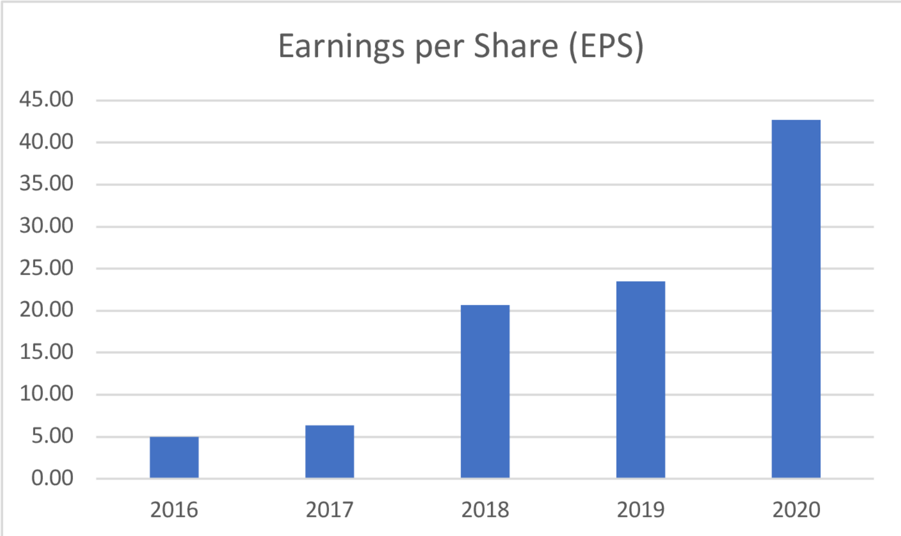



| ***Profitability Ratios*** | **2016** | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|---|
| Gross Profit Margin | 0.35 | 0.37 | 0.40 | 0.41 | 0.40 |
| Operating Profit Margin | 0.03 | 0.02 | 0.05 | 0.05 | 0.06 |
| Net Profit Margin | 0.017 | 0.017 | 0.043 | 0.041 | 0.055 |
| Earnings per Share (EPS) | 5.00 | 6.32 | 20.68 | 23.46 | 42.66 |
| Return on Total Assets (ROA) | 0.028 | 0.023 | 0.062 | 0.051 | 0.066 |
| Return on Common Equity (ROE) | 0.12 | 0.11 | 0.23 | 0.19 | 0.23 |

Source: Amazon Annual Reports (2020)

Amazon's gross margin has increased from 0.35 in 2016 to 0.40 in 2020. Although the Amazon's industry becomes more competitive, it has maintained its gross profit margin ratio to increase. In terms of operating profit margin, the figures have been consistent from 0.03 in 2016 to 0.06 in 2020. Similarly, net profit margin remained the same in the years 2016 and 2017, meanwhile it grew in 2018 to 0.043 and fell in 2019 to 0.041 and finally, increased in 2020 to 0.055. Likewise, return on total assets fell from 0.028 to 0.023 in 2017 and increased in 2018 to 0.23 and fell again in 2019 to 0.19 and increased in 2020 to 0.066. This suggests an efficient management of generating profits with its available assets. In a like manner, the trend for return on common equity was the same as return on total assets. It fell in the same year, both 2017 and 2019, and returned in 2020 to 0.23. Although the trend was fluctuating, return on common equity remained to its highest which generally is good for the company. This is favorable for Amazon since the higher the return the better.

*Figure 12. Earnings per Share (EPS)*



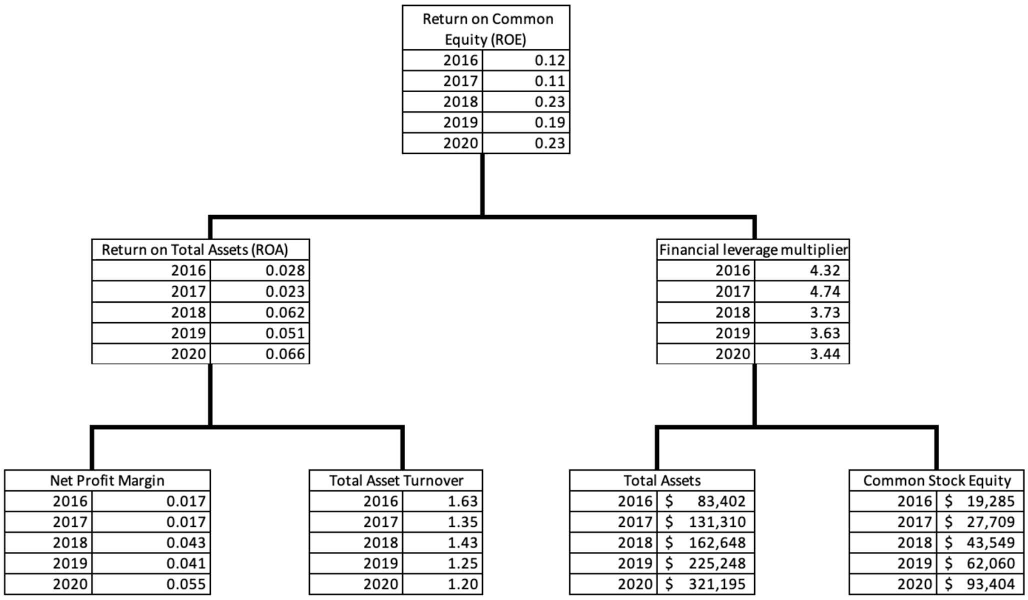

Source: Amazon Annual Reports (2020)

Amazon's earning per share (EPS) has increased significantly from $5 in 2016 to $42.66 in 2020. This is a large improvement for Amazon as it increased substantially. This is a good indicator for Amazon's profitability. This indicates a greater value for Amazon resulting to more investors investing in the company's share since Amazon's share become more profitable.

## 4.11 **DuPont System of Analysis**

The DuPont system of analysis with application to Amazon.com, Inc is presented below.

*Figure 13. Dupont Analysis*




Source: Amazon Annual Reports (2020)

Based on the DuPont analysis above, results showed the return into profit-on-sales and efficiency-of-asset-use elements. It shows how Amazon has increasing net profit margin within the years of 2016 to 2020 with decreasing total asset turnover which resulted to a reasonably increasing ROA. This implies that high ROA, Amazon has fewer assets involved in generating their profits. Thus, throughout the years Amazon has efficiently manage generating profit from their total assets. Similarly, Amazon has increasing ROE which suggests that it is generating 23 cents per $1 of equity. This means that Amazon is managing its assets well to create profits. In addition, financial leverage is declining throughout the period, implying that the firm has reduced its debts and mitigating financial risks.

## 4.12 Altman Z-score

Following the application of Altman Z-score model the results are shown below as follows:

*Table 9. Altman Z-score*

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| x1 | 0.02 | 0.02 | 0.04 | 0.04 | 0.02 |
| x2 | 0.06 | 0.07 | 0.12 | 0.14 | 0.16 |
| x3 | 0.05 | 0.03 | 0.08 | 0.06 | 0.07 |
| x4 | 0.30 | 0.27 | 0.37 | 0.38 | 0.41 |
| x5 | 1.63 | 1.35 | 1.43 | 1.25 | 1.20 |
| **Z** | 2.09 | 1.73 | 2.12 | 1.92 | 1.93 |

Source : Data from Amazon Annual Reports (2020)

Based on the results above, it indicates level of risk of bankruptcy of Amazon. According to the results, it can be observed that the Z-score is from years 2016 to 2020 except 2017 has been in gray zone which is interpreted as stable. In the year 2017, Z-score went below 1.81 which suggest the company could be distressed and is likely to go bankrupt. Fortunately, following that years Amazon's Z-score has improved.

# 5 Results and Discussion

In this part of the study, this paper aims to make interpretations according to calculations and graphs analyzed in the practical part.

## 5.1 Results of Operations of Amazon

Amazon.com is one of the most valuable company in the world which points interest in assessing its financial statements to provide insights on the key elements that brought to their success. Following the research question 1, based on the indicators of financial analysis the financial position of Amazon changed drastically from the years 2016 to 2020. Sales increased tremendously in the last five years. This was evident from the gross profit margin and net profit margin. The net sales comprises of both sales of products and service as per Amazon (2020). Product sales includes revenue from product sales and sales associated with shipping and digital media content. Sales from services are linked with third-party fees and associated shipping charges, Amazon Web Services sales, specific digital content subscriptions, advertising services and affiliated credit card contracts. Sales was also affected by foreign exchange rates pertaining to its international businesses. Correspondingly, figures showed in table 3 the losses that Amazon is incurring in its international segment from years 2016 to 2019 and finally it turned into profit in the year 2020. This can be associated with the change in the consumer behavior during the pandemic COVID19. This has brought Amazon's consolidated operating income to increase.

Additionally, in light of research question 2 pertaining to the changes in profitability and financial performance of Amazon, the present findings suggests that following the investments in new technologies such as AWS it has contributed a large portion of Amazon's profits. The increase in AWS operating income has made a significant impact on the overall operating income as such in 2018 operating income from AWS has increased three times in comparison to its previous year. This is related to the increase in customer utilization and cost structure productivity Amazon (2020). However, this was counterbalanced by the changes in prices and increased expenses on technology infrastructure and expenses related to sales and marketing connected to payroll.

Furthermore, cost of sales has also increased continuously within the last five years as a result of increase in product and shipping expenses due to increase of sales. Cost of goods sold mainly includes the purchase price of consumer goods, the cost of digital media content, the cost of packing materials, sorting and distribution centers and related equipment, and the shipping expenses for inbound and outbound transportation Amazon (2020). This has also been a vital factor of Amazon's services to ensure that they provide goods in a timely manner.

Moreover, vertical analysis of Amazon's income statement table 8 showed that a large part of Amazon's operating expenses such as 13-15% was the fulfillment costs which includes primarily of costs related to North American and International fulfillment centers, customer service centers, physical store operations and staffing. Transaction costs associated with AWS payment processing are included in fulfillment Amazon (2020). The increase in expenses related to fulfillment in the last five years is mainly because of variable costs relating to growth in product and service sales volume and higher inventory level, and expenses from expanding fulfilment network that includes Amazon's physical stores.

Similarly, another important factor that influenced the changes in profitability and financial performance of amazon, following research question 3, is technology and content. Technology and content was 12-13 percent part of Amazon's sales as per the vertical analysis of income statement table 8. It has increased throughout the years from $16 billion to $42 billion. Amazon (2020) has invested a lot in its technology and content which consist of salary and related expenses of personnel that are part of the research and development of new and current products and services, developing, designing and maintaining Amazon's website and maintaining and displaying Amazon's goods and services and infrastructure expenses. Expenses related to infrastructure are depreciation costs associated with servers, network equipment, data centers, rents, utilities and other costs required to sustain AWS. All together reflects Amazon's investment to provide their customers with wide range of products and services.

Consequently, marketing is also an important part of Amazon’s services although not as high as the previous expenses. As per the vertical analysis of income statement in table 8, marketing is only 5-6% of the net sales from years 2016 to 2020. Amazon has continuously invested in its marketing strategies that is evident in their income statement to have increased throughout the period of 2016 to 2020. This is mostly connected to online marketing channels including sponsored search, affiliate programs, social and online advertising and tv advertising Amazon (2020). The marketing costs are dependent on the increase in sales and rate changes. This can be seen in table 7 wherein in 2020 marketing expenses increased to as high as 204% compared to the previous year.

Based on the ratio analysis of Amazon, it seems that Amazon is in a good shape although figures are fluctuating it still managed to enhance its position by the year 2020 which is its most favorable year. Although Amazon’s debt ratio is below 1, it can be observed that managing its debts should be one of its priorities. A high ratio may suggest that the company is positioning itself in some risk of defaulting on its debts in the case the interest increases. Hence, Amazon should maintain to decrease its debt ratio below 0.7. On the other hand, its times interest earned ratio shows great figures as it can be seen that there are enough profit available to control its debts.

In terms of its profitability, Amazon seems to be managing its assets efficiently to generate its profits as can be seen in figure 11 profitability ratios are greater than 0. This was also evident from the horizontal analysis of Amazon’s income statement as such 800% increase in the year 2020. Similarly, DuPont analysis broke down different elements of Amazon’s balance sheet and income statement. As shown in figure 13, ROA has an increasing trend which shows good result in generating profit from its investments. Additionally, financial leverage showed a decreasing trend, indicating that the company has aimed to decrease the level of its financial leverage through its debts and decreasing the financial risk of the company.

Further, Altman Z-score model was also applied as presented in table 9. Although, previous analysis have showed that Amazon's profits were favorable in the year 2020, it can be seen in table 9 Amazon's Z-score that year is low in comparison to previous years such as 2016 and 2018 where figures are above 2.09. Evidence also showed that Amazon's operations are stable except for the year 2017 when Z-score level showed that the company may experience distress.

Year 2017 showed a score below 1.81 which suggests that bankruptcy might be predicted in the years ahead however, fortunately following that year, the score increased and remained stable. The decrease in the Altman Z-score in the year 2017 may be due to the decrease in EBIT which has decreased EBIT to total assets ratio ($x_3$). Similarly, shareholders equity to total liabilities ratio ($x_4$) also decreased which reflects that Amazon has a relatively high amount of debt. In the same year, sales to assets ratio ($x_4$) also decreased which can be attributed that sales did not increase proportionately to its assets. As Friedlob and Schleifer (2003), has mentioned Altman Z-score should only serve as a warning sign and not the ultimate factor of imminent ruin, all things should still be considered.

## 5.2 **Impact of COVID-19 Pandemic**

The COVID-19 pandemic and subsequent global disruptions have had an impact on Amazon's business including its customers, suppliers and its third-party sellers. Amazon's logistics, transportation, supply chain, purchasing and third-party seller processes has been affected by the pandemic. Amazon (2020) has implemented changes in their business processes in order to ensure employee and customer safety measures by improving its hygienic rules such as physical separation, personal protective equipment and disinfectant spraying. For that reason, Amazon's expenses have increased by approximately $4 billion due to COVID-19 related expenses.

Furthermore, the subsequent global disruptions have resulted in significant market volatility. These disruptions may have an effect on company's account receivable, asset valuations leading to impairment charges, and affect the supply of lease and funding credit and also other alternative segments of the credit markets. For that reason, Amazon (2020) has used variety of financing strategies to fund their operations and capital expenditures to continuously have the financial flexibility within the current market circumstances.

Following the financial analysis in previous section, it can be observed that in the year 2020 total net sales have increased by 184%. The increase was due to higher net sales in the North America and International segments considering the increase in demand as consumers are staying more at home. Isik et al. (2021) pointed out that consumer demand increased due to COVID restrictions. This was also evident for other online retail sales and not only for Amazon. For that reason, Amazon has increased their order capacity by above 60% and hired more employees due to increasing demand. According to Amazon's report in February 2020, Amazon has hired over 400,000 employees, full-time and part-time, to increase the capacity of their fulfillment network in order to meet its customer demand.

Additionally, increase in fulfillment costs and cost of sales have been observed which is mainly because of the effect of lower productivity, higher employment of people and their benefits as well as increase in expenses to ensure safe workplace.

# 6 Conclusion

This research aimed to evaluate financial statements of Amazon through indicators of financial analysis such as horizontal analysis, vertical analysis, and ratio analysis. In order to achieve the aim, a theoretical background was defined to provide an understanding of the financial indicators. The literature review established the role of financial analysis to stakeholders of Amazon and the process of interpreting the results. Financial information is important to statement users such as investors, lenders, and managers to make financing, investing, credit strategies and allocation of resources decisions.

Research question 1 was fulfilled as findings explained the tremendous performance throughout the year 2016 to 2020 that Amazon had. Despite the occurrence of the COVID19 pandemic, 2020 is the most favorable year for Amazon as consumer behavior has changed and online shopping became more essential than ever due to restrictions. Throughout the history of Amazon, acquiring several businesses in the different market made Amazon grow quickly. This pertains to research question 2 as such the changes in profitability of Amazon is due to its investments in different market and investments in new technology. Not only having the first movers strategy that made its brand obtain loyal customers but also its diversification strategy brought its competitiveness in the market.

Amazon has expanded its business from online bookselling to information technology services. Based on the analysis of its income statement, a large portion of its expenses are due to its technology and content. This also answers research question 3 which refers to the factors that influenced these changes. This can be attributed to its investments in technology which aimed to expanding its business to more technological innovations and not only e-commerce. Hence, in 2018 Amazon ranked fifth on world’s most innovative companies. For instance, the growth of Amazon Web Services which offers cloud, artificial intelligence and machine learning has contributed to a large portion of its income as provided in the vertical analysis of its income statement.

Although Amazon is one of the most valuable companies in the world, Amazon is also subject to facing financial distress if not managed properly. Based on its liquidity ratio analysis, Amazon could improve its quick ratio such as it should be greater than 1. It can be implied that Amazon may not be able to fully pay off its debts if circumstances persist. This was also evident in the Altman Z-model wherein in 2017 there was a possibility of bankruptcy due to a low level of Z-score. Fortunately, figures improved and in 2020 it became most valuable brand.

As all research questions were fulfilled. In the future, the financial analysis made it clear the recommendation that Amazon should be aware of its expenses as based on the financial analysis a large portion of its sales is decreased by its high expenses. Not only that but also Amazon should maintain to decrease its liabilities and manage its working capital. Amazon should pay particular attention to its debt burden as such it might have to generate more cash flows to sustain optimal operating conditions after the pandemic situation. Consequently, financial analysis and application bankruptcy models are good measures in serving as a warning in times of financial troubles.

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# 8 Appendix

## 8.1 Amazon's Balance Sheet

**AMAZON COM INC**

**BALANCE_SHEET**

**Form Type: 10-K**

| **ASSETS** | **2016** | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|---|
| Current assets: | | | | | |
| Cash and cash equivalents | $ 19,334 | $ 20,522 | $ 31,750 | $ 36,092 | $ 42,122 |
| Marketable securities | 6,647 | 10,464 | 9,500 | 18,929 | 42,274 |
| Inventories | 11,461 | 16,047 | 17,174 | 20,497 | 23,795 |
| Accounts receivable, net and other | 8,339 | 13,164 | 16,677 | 20,816 | 24,542 |
| **Total current assets** | **45,781** | **60,197** | **75,101** | **96,334** | **132,733** |
| Property and equipment, net | 29,114 | 48,866 | 61,797 | 72,705 | 113,114 |
| Operating leases | - | - | - | 25,141 | 37,553 |
| Goodwill | 3,784 | 13,350 | 14,548 | 14,754 | 15,017 |
| Other assets | 4,723 | 8,897 | 11,202 | 16,314 | 22,778 |
| **Total assets** | **$ 83,402** | **$ 131,310** | **$ 162,648** | **$ 225,248** | **$ 321,195** |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | | | | |
| Current liabilities: | | | | | |
| Accounts payable | $ 25,309 | $ 34,616 | $ 38,192 | $ 47,183 | $ 72,539 |
| Accrued expenses and other | 13,739 | 18,170 | 23,663 | 32,439 | 44,138 |

| | | | | | |
|---|---|---|---|---|---|
| Unearned revenue | 4,768 | 5,097 | 6,536 | 8,190 | 9,708 |
| **Total current liabilities** | **43,816** | **57,883** | **68,391** | **87,812** | **126,385** |
| Long-term lease liabilities | - | - | 9,650 | 39,791 | 52,573 |
| Long-term debt | 7,694 | 24,743 | 23,495 | 23,414 | 31,816 |
| Other long-term liabilities | 12,607 | 20,975 | 17,563 | 12,171 | 17,017 |
| Commitments and contingencies (Note 7) | | | | | |
| Stockholders' equity: | | | | | |
| Preferred stock, $0.01 par value: | | | | | |
| Authorized shares - 500 | | | | | |
| Issued and outstanding shares - none | - | - | - | - | - |
| Common stock, $0.01 par value: | | | | | |
| Authorized shares - 5,000 | | | | | |
| Issued shares | | | | | |
| Outstanding shares | 5 | 5 | 5 | 5 | 5 |
| Treasury stock, at cost | (1,837) | (1,837) | (1,837) | (1,837) | (1,837) |
| Additional paid-in capital | 17,186 | 21,389 | 26,791 | 33,658 | 42,865 |
| Accumulated other comprehensive loss | (985) | (484) | (1,035) | (986) | (180) |
| Retained earnings | 4,916 | 8,636 | 19,625 | 31,220 | 52,551 |
| **Total stockholders' equity** | 19,285 | 27,709 | 43,549 | 62,060 | 93,404 |
| **Total liabilities and stockholders' equity** | **$ 83,402** | **$ 131,310** | **$ 162,648** | **$ 225,248** | **$ 321,195** |

Source: Amazon Annual Reports (2020)

## 8.2 **Amazon's Income Statement**

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Net product sales | $ 94,665 | $ 118,573 | $ 141,915 | $ 160,408 | $ 215,915 |
| Net service sales | 41,322 | 59,293 | 90,972 | 120,114 | 170,149 |
| **Total net sales** | 135,987 | 177,866 | 232,887 | 280,522 | 386,064 |
| Operating expenses: | | | | | |
| Cost of sales | 88,265 | 111,934 | 139,156 | 165,536 | 233,307 |
| Fulfillment | 17,619 | 25,249 | 34,027 | 40,232 | 58,517 |
| Technology and content | 16,085 | 22,620 | 28,837 | 35,931 | 42,740 |
| Marketing | 7,233 | 10,069 | 13,814 | 18,878 | 22,008 |
| General and administrative | 2,432 | 3,674 | 4,336 | 5,203 | 6,668 |
| Other operating expense (income), net | 167 | 214 | 296 | 201 | (75) |
| **Total operating expenses** | 131,801 | 173,760 | 220,466 | 265,981 | 363,165 |
| Operating income | 4,186 | 4,106 | 12,421 | 14,541 | 22,899 |
| Interest income | 100 | 202 | 440 | 832 | 555 |
| Interest expense | (484) | (848) | (1,417) | (1,600) | (1,647) |
| Other income (expense), net | 90 | 346 | (183) | 203 | 2,371 |
| Total non-operating income (expense) | (294) | (300) | (1,160) | (565) | 1,279 |
| Income before income taxes | 3,892 | 3,806 | 11,261 | 13,976 | 24,178 |
| Provision for income taxes | (1,425) | (769) | (1,197) | (2,374) | (2,863) |
| Equity-method investment activity, net of tax | (96) | (4) | 9 | (14) | 16 |
| **Net income** | **$ 2,371** | **$ 3,033** | **$ 10,073** | **$ 11,588** | **$ 21,331** |
| Basic earnings per share | $ 5.01 | $ 6.32 | $ 20.68 | $ 23.46 | $ 42.64 |
| Diluted earnings per share | $ 4.90 | $ 6.15 | $ 20.14 | $ 23.01 | $ 41.83 |

Source : Amazon Annual Reports (2020)