Multiples Valuation of Amazon.Com Inc.: Determining Fair Market Value Through Comparative Analysis

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Abstract. The main aim of this research study is to determine the market value of Amazon. Through analyzing these strategic financial ratios, the study seeks to give an accurate and concise picture of Amazon's market value. The multiples valuation method is preferred due to its ease in use and in generating quick comparable multiples across different companies. It plays a crucial role in identifying how the market capitalizes Amazon in comparison to the other firms in the industry. This comparative analysis is very important to find out where there is a difference in the valuations in relation to potential investment opportunities or risks. Considering the research objectives and questions, the findings of this study will be most useful to investors, analysts, and financial managers. The information can be used by investors in making right decisions of either purchasing the stocks in Amazon or holding on it or even selling it. Analysts will stand to gain from enhanced insights regarding the market position and financial health of Amazon. These conclusions will be useful for financial managers for strategic planning and evaluation of potential risks when creating effective financial strategies. In conclusion, this research will be beneficial in making better investment and management decisions by determining if the current market price of Amazon stock is justified following a comparison to its competitors and an evaluation of its performance, both financially and competitively.

Keywords: Market Value; Financial Analysis; Amazon; Risk assessment.

1. Introduction

1.1. Research Background and Significance

Today, one can record that the economy of the entire world has grown significantly in the recent past and the growth is anticipated to continue. The retail industry is on the rise due to such factors as advance in technology, online business, and growing population demand. The financial valuation industry has witnessed significant advancements with the development of various models and metrics aimed at enhancing the precision of asset, stock, and security evaluations.

Amazon is an e-commerce company founded by Jeff Bezos in 1994.and it provides cloud computing services and streaming video. Now operating in North America, Europe, and Asia, the firm is growing its markets and products it sells. It is also an online business that deals with different products from everyday use items such as clothing and food to other commercial products. Amazon. It can be therefore categorized under Amazon supply base. selling electronic devices and services, cloud computing under Amazon Web services, delivery mechanisms, entertainment segment including Amazon. Since it is the biggest online store worldwide. In this paper, the author critically assesses Amazon's fair market value through the multiple's valuation method with the emphasis on the comparison with chief rivals.

The importance of supporting the research in this article lies in the need to enhance people's understanding of how several financial measures, especially FCFF, affect company value. Therefore, this research seeks to uncover weaknesses in existing methods and their application in various situations to enhance the value detection instruments that investors, analysts, and corporate managers utilize with a view to arrive at better decisions. They fulfil the following objectives: It provides updated information for more accurate valuations to existing models, adds to the body of financial theory by enhancing models and presenting facts, enhances the efficiency and effectiveness of markets by offering appropriate valuations and, lastly, it helps to provide proper comparability

between firms. Thus, this research seeks to extend the existing knowledge by pushing forward the theoretical framework of financial valuation as well as target practical weaknesses within this field, thus improving the overall quality and relevancy of the performed financial analysis.

1.2. Literature Review

Valuation is used by the analyst to value asset, stock, or security and provides a range of the current and potential asset value in each firm. Its relevance in financial decision-making process especially in situating investment decisions for particular stocks or whole companies cannot be overemphasized. As time went on, different types of valuation techniques were developed, and these are based on different assumptions at times and there is criticism and arguments regarding the validity of each of them.

1.2.1 Multiples

Several studies have also emphasized how important it is to use relative valuation adding On other methods such as DCF model to have an understanding of the worthiness of a firm. Fernandez investigated the aspect of valuing an equity using P/E and EV/EBITDA ratios in relative valuation. The survey showed that compared to P/E ratios, the EV/EBITDA ratios are lesser distorted by the screen and more uniform across industries and geographical locations; hence it is safer to compare across the ratios. For example, the P/E multiple calculates the ratio of a stock's market price to its EPS. Multiples make it possible to put into comparison the valuation of companies, industries or the market relative to a certain standard.

1.3. Research Contents

The research idea of this article is to assess Amazon's market value using the multiples valuation method, particularly focusing on Free Cash Flow to Firm (FCFF) as a pivotal indicator, alongside a comparative analysis with key competitors

2. Amazon's Business Model

The internet serves as the main distribution channel for most Amazon's products and services, playing a vital role in the company's infrastructure. Figure 1 is a visualization of Amazon's revenue sources between June 2020 and June 2021 with the main source of revenue being online stores.

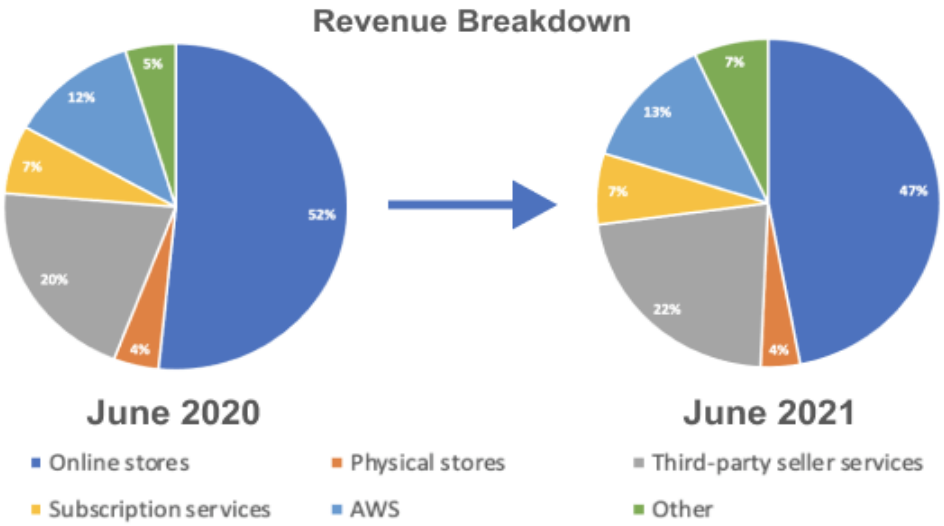

Figure 1: The revenue breakdown from June 2020 to June 2021

Figure 1 shows visualization of Amazon's most well-known primary activities according to their financial statements between June 2020 and 2021.

2.1. Revenues

On average, during the past five years the company has increased its net sales with a rate of 18%. As shown in Table 1 compared below, the segment of the online stores is the leading one and amounts to 42. Consequently, the sum of hypothecated revenues is 8% of the total revenues.

Table 1: 5-year total revenues by segment

Segmented Revenue	**2018**	**2019**	**2020**	**2021**	**2022**
Online Stores	$122,987	$141,247	$197,346	$222,075	$220,004
Physical Stores	$17,224	$17,192	$16,227	$17,075	$18,963
Retail Third-Party Seller Services	$42,745	$53,762	$80,461	$103,366	$117,716
Subscription Services	$14,168	$19,210	$25,207	$31,768	$35,218
AWS	$25,655	$35,026	$45,370	$62,202	$80,096
Other	$10,108	$14,085	$21,453	$33,336	$41,986
Total Net Sales	**$232,887**	**$280,522**	**$386,064**	**$469,822**	**$513,983**

Every segment has improved its result, Physical stores is the only segment that has declined to 0. 2% in 2019 while it will be 5. 6% in 2020 mainly because of the effects from the COVID 19 and Online stores which declined by a slight 0. 9% in 2022. By and large, the information shows high levels of sales up to the year 2021, in which industrialized growth rates gradually decreased.

2.2. Income

Every segment has improved its result, Physical stores is the only segment that has declined to 0. 2% in 2019 while it will be 5. 6% in 2020 mainly because of the effects from the COVID-19 and Online stores which declined by a slight 0. 9% in 2022. By and large, the information shows high levels of sales up to the year 2021, in which industrialised growth rates gradually decreased (see Table 2).

Table 2: Operating costs over five years

Income Statement Information	2018	2019	2020	2021	2022
Total Net Sales	$232,887	$280,522	$386,064	$469,822	$513,983
Cost of Sales	$139,156	$165,536	$233,307	$272,344	$288,831
Fulfillment	$34,027	$40,232	$58,517	$75,111	$84,299
Technology and Content Marketing	$28,837	$35,931	$42,740	$56,052	$73,213
General and Administrative	$13,814	$18,878	$22,008	$32,551	$42,238
Other Operating Expense	$4,336	$5,203	$6,668	$8,823	$11,891
Net	$296	$201	$75	$62	$1,263

Source: 10-K Financial Report Amazon.com, Inc.

2.3. Profitability Indicators

EBITDA, EBIT, and Net Income are key indicators of a company's profitability as visualized in figure 2. For Amazon, these indicators showed consistent and impressive growth until 2022, when EBITDA decreased by 8%, EBIT dropped by 50%, and Net Income fell by $2 billion. These declines are due to slower sales growth, rising operating expenses and additional expenses detailed in the income statement.

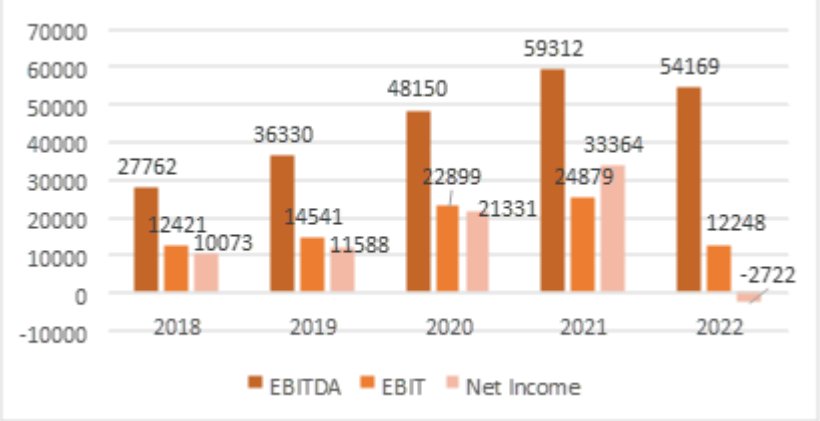

Figure 2: 5-year Profitability indicators (in m€) which includes EBITDA, EBIT, and Net Income.

3. Valuation

This study will evaluate Amazon's fair value using two main methods: DCF and SOTP (comparative) analysis. Strengthening secondary methodologies will also be utilised in the process of valuation. It also involves the consideration of what is popularly referred to as price proceedings and market sentiments, which constitutes an important aspect in ascertaining the strategic and ultimate decisions of the market players.

3.1. Discounted Cash Flow Valuation

3.1.1 Free Cash Flow to Firm

To model the Free Cash Flow to Firm (FCFF) forecasts, several assumptions about the elements of the financial reports need to be made.

The 5-year average growth rate of the various business lines is presented in Table 3. Namely, in the aspect of the growth rate expansion.

Table 3: Average 5-year segment growth rate

	5-Year Average
Online Stores	16.5%
Physical Stores	2.6%
Retail Third-Party Seller Services	29.4%
Subscription Services	25.9%
AWS	33.0%
Other	43.2%

However, the sales are expected to grow in the future as Amazon entered into new markets. Hence, for ease of analysis, it will be important to assume that each business division will experience a growth rate of 20%.

3.1.2 Operating Expenses Estimation

Predominantly, the estimation is based on the fact that the general tendency of fluctuation in the average percent of sales for the elements of “Operating Expenses” seems to remain stable in the analysed historical period, thus the forecast of this tendency for the following 5 Years in Table 4 below. As such, it is possible to use the Average Growth Rate of each element to derive the forecast for 5-years.

Table 4: Operating Expenses 5-year average

Income Statement	5-Year Average
Cost of Sales	58.7%
Fulfilment	15.3%
Technology and Content	12.5%
Marketing	6.7%
General and Administrative	1.9%
Other Operating Expense, net	0.1%

Without a doubt, it would be logical for Amazon to strive to decrease expenses in general and sales costs. However, these elements might be relatively smaller as a proportion of the total income, although the value may increase over the next ten years. Thus, this paper will uphold the five-year average rate or the maximum interest rate that is allowed per year.

3.2. Capex Estimations

This paper has also assumed Capex considering historical records that involved a measurement on the previous year's value in Table 5 below.

Table 5: 10-year projected Capex

Capex	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Capex	$53,185	$63,863	$74,368	$84,343	$93,536	$101,794	$109,057	$115,332	$120,675	$125,172	$128,918

This aspect shows that due to Amazon's focus on cash growth as the main strategic objective.

The Debt to Equity and the Debt to Capital ratios were computed using the FY22 data. To obtain the Corporate Tax Rate for FY22, the tax rate from the World Bank for each nation was obtained, as well as the Beta from the Refinitiv. Using this information, the estimated the unlevered Beta using equation 1 below.

$$Unlevered\ Beta = Levered\ Beta\ (1+(1-Corporate\ Tax\ Rate)) \times Debt\ Equity \quad (1)$$

As per the findings using Refinitiv data, a beta of one. 26 yards to gain an unlevered beta of 1.19. This simply means that the amount through which the share of Amazon fluctuates in the stock market is higher than the total market, though it may not necessarily mean it is more stable than the market.

3.2.1 Target Structure

Amazon's current debt to equity ratio is 0.03x and will maintain this ratio as target as shown in Table 6 below.

Table 6: Current capital Structure and target

Market Cap	$1,127,823
Total Debt	$36,989
Debt / Equity	0.03x

3.2.2 Cost of Debt

The after-tax cost of debt is calculated using the 3-year average pre-tax cost of debt, which is 3.5%, and the tax rate at 25%, resulting in a cost of debt of 2.6%.

$$cost\ of\ debt = Pretax\ cost\ of\ debt \times (1 - tax\ rate) \quad (2)$$

This results in a cost of debt of 2.6%.

3.2.3 Cost of Equity

Using the elements of the Cost of Equity mentioned earlier in the section, the following data includes all the necessary points to calculate the Cost of Equity parameter using the formula (3). The cost of equity components is shown in Table 7.

$$Cost\ of\ equity = (Equity\ risk \times Levered\ equity\ beta) + Rf \quad (3)$$

Table 7: The Cost of Equity components

Risk Free Rate	3.8%
Equity Risk Premium	4.6%
Levered Equity Beta	1.26

The article can finally calculate WACC following the formula below:

$$WACC = (cost\ of\ equity \times Equity\ Debt + Equity) + (Debt\ Debt + Equity \times cost\ of\ debt) \quad (4)$$

To get a WACC of 9.5%.

3.3. Terminal Value

Based on the elements mentioned earlier, such as the Risk-Free Rate, Equity Risk Premium, and Levered Equity Beta and calculated the cost of equity to be 9.5%.

This calculation method assumes a perpetual cash flow generated starting in 2033 that grows annually. The Terminal Value is calculated using the following technical formula:

$$LYFCFF \times (1 + g)\ (WACC - g) \quad (5)$$

This approach determines the value of a business after a projected period by using current public market valuations of comparable companies. For instance, the terminal value is obtained by multiplying the last projected EBITDA (2033) by the multiplier, which is 13x according to Refinitiv data.

4. Methodology

Taking into consideration the Comparable Analysis was performed by evaluating the Revenue, EBITDA, Earnings as well as the Cash Flows gotten information on every listed market player. Amazon occupies the first place in terms of Market Cap and comes second in Enterprise value among its counterparts as illustrated in Table 8 below.

Table 8: Comparable companies market data

Company Name	*Share Price [$/sh.]*	*Shares [MM]*	*Market Cap. [$MM]*	Total Debt	Cash	*Net Debt [$MM]*	*Enterprise Value [$MM]*
Amazon.com, Inc.	$109	10,347	$1,127,823	$86,723	$49,734	$36,989	$1,164,812
1P Comps							
Walmart Inc.	$153	2,700	$413,100	$44,622	$8,841	$35,781	$448,881
The Home Depot, Inc.	$290	1,010	$292,900	$43,193	$2,757	$40,436	$333,336
Lowe's Companies, Inc.	$203	596	$120,988	$33,960	$1,348	$32,612	$153,600
Target Corporation	$158	461	$72,838	$16,139	$2,229	$13,910	$86,748
3P Comps							
Alibaba Group Holding Limited	$87	2,590	$225,330	$159,825	$235,437	($75,612)	$149,718
eBay Inc.	$45	534	$24,030	$7,721	$2,431	$5,290	$29,320
Etsy, Inc.	$96	123	$11,808	$2,289	$792	$1,497	$13,305
Advertising Comps							
Alphabet Inc.	$116	6,820	$791,120	$14,069	$25,924	($11,855)	$779,265
Facebook, Inc.	$236	2,560	$604,160	$11,977	$12,420	($443)	$603,717
Cloud Comps							
salesforce.com, inc.	$203	979	$198,737	$10,601	$7,016	$3,585	$202,322
Oracle Corporation	$97	2,700	$261,900	$91,811	$8,219	$83,592	$345,492
SAP SE	$121	1,170	$141,570	$12,928	$9,507	$3,421	$144,991
VMware, Inc.	$123	428	$52,644	$10,488	$4,692	$5,127	$57,771

4.1. Sum-of-the-Parts (SOTP) Analysis

The Sum-of-the-Parts Analysis is a technique used in CA as a secondary technique or methodological instrument to reach an aggregation total of a multitude of part tenors translated into an overall tenor. This approach, in turn, enables the assessments of each business unit to be carried out individually. As described above, Amazon has a very diverse business model and its revenue streams are significantly different from those of traditional competitors, which makes it difficult to identify comparable companies for a Typical Multiple methodology and because there were few similar precedent transactions. Consequently, an SOTP evaluation for Amazon should be segmented into five distinct areas: Online and Brick-and-Mortar Stores Services, Third parties Retail Services, Prime or Subscription Services, Cloud and related services (AWS), and Advertising. Similar for each business segment, Trading Multiples analysis will be followed by Comparable Companies analysis, where it will be compared with the currently existing market multiple. Considering the projected revenue for the initial forecasted period: Considering the projected revenue for the initial forecasted period shown in Table 9 below:

Table 9: 2023 Revenue forecast on Amazon's business segments

Segmented Revenue	2023E
Online Stores	$256,394
Physical Stores	$19,460
Retail Third-Party Seller Services	$152,379
Subscription Services	$44,348
AWS	$106,513
Other	$60,144
Total Net Sales	$639,238

The current trading multiples (High, Low, and Average), previously computed in the "Comparable Companies" section, will be applied to the forecasted period of 2023, as shown in Table 10.

Table 10: Amazon's Trading multiples across its business segments

	EVRevenue		**Current Trading Multiples EVEBITDA**		**P/E**		**PiCF**	
Company Name	FY+1	FY+2	FY+1	FY+2	FY+1	FY+2	FY+1	FY+2
Amazon.com,Inc	2.1x	1.9x	13.0x	10.9x	71.8x	44.2x	14.9x	11.5x
P Comp5								
Average:1P Comps	1.3x	1.3x	12.2x	11.8x	25.5x	19.2x	17.8x	12.5x
Median:1PComps	1.2x	1.3x	12.6x	11.8x	24.7x	18.6x	17.7x	12.4x
Low:1PComps	0.8x	0.7x	10.5x	10.6x	19.0x	14.9x	13.6x	10.0x
High:1P Comps	2.1x	2.1x	13.2x	13.2x	33.7x	24.9x	22.2x	15.0x
3P Comps								
Average:3P Comps	2.9x 2.7x		11.0x 20.5x			9.9x 16.9x	12.0x 10.3x	
Median:3PComps	2.5x 2.4x		7.9x 11.0x			7.5x 9.9x	9.8x 7.7x	
Low:3P Comps	1.5x	4.8x	7.5x	6.7x	10.9x	9.8x	8.2x	7.5x
High:3P Comps	1.4x	4,3x	17.5x	15.3x	39.7x	31.1x	18.0x	15.7x
Advertising Comps								
Average: Advertising Comps	4.6x 4.1x		10.5x 21.0x			9.2x 17.4x	13.4x 10.9x	
Median: Advertising Comps	4.6x 4.1x		10.5x 21.0x			9.2x 17.4x	13.4x 10.9x	
Low: Advertising Comps	4.6x	4.6x	9.1x	7.9x	20.2x	16.2x	11.8x	9.1x
High: Advertising Comps	4.1x	4.1x	11.8x	10.4x	21.9x	18.6x	15.0x	12.8x

Cloud Comps				
Average: Cloud Comps	5.6x 5.2x	14.7x 221.8x	13.2x 20.6x	19.3x 17.3x
Median: Cloud Comps	5.6x 5.1x	14.5x 31.2x	13.4x 18.5x	20.8x 17.6x
Low: Cloud Comps	4.4x 4.1x	11.7x 19.4x	10.9x 17.1x	12.1x 11.8x
High: Cloud Comps	7.0x 6.5x	18.1x 805.1x	151x 28.3x	23.6x 22.2x
Subscription Comps				
Average: SubscriptionComps	2.8x 2.5x	133.0x -66.4	92.4 89.9x	68.0x 27.1x
Median: Subscription Comps	2.3x 2.1x	83.6x -69.8x	58.8x 17.9x	36.2x 21.7x
Low: Subscription Comps	1.8x 1.5x	8.6x -157.0x	8.6x -297.0x	8.1x 7.5x
High: SubscriptionComps	4.7x 4.2x	356.0x 31.1x	243.4x 621.0x	191.5x 57.5x

4.2. 52-weeks Trading

Referring to the recent share prices listed by the NASDAQ:100 is relevant, because it provides information on expectations of market participants connected with the given stock share price. It is also interesting to determine how much such valuation method can vary from the share price at the time of valuation. The stock price has shown a volatile form of trend movement standing at $82 high and a low of $145 in the last 52 weeks and hovering around an average of $108 as illustrated in figure 3 below.

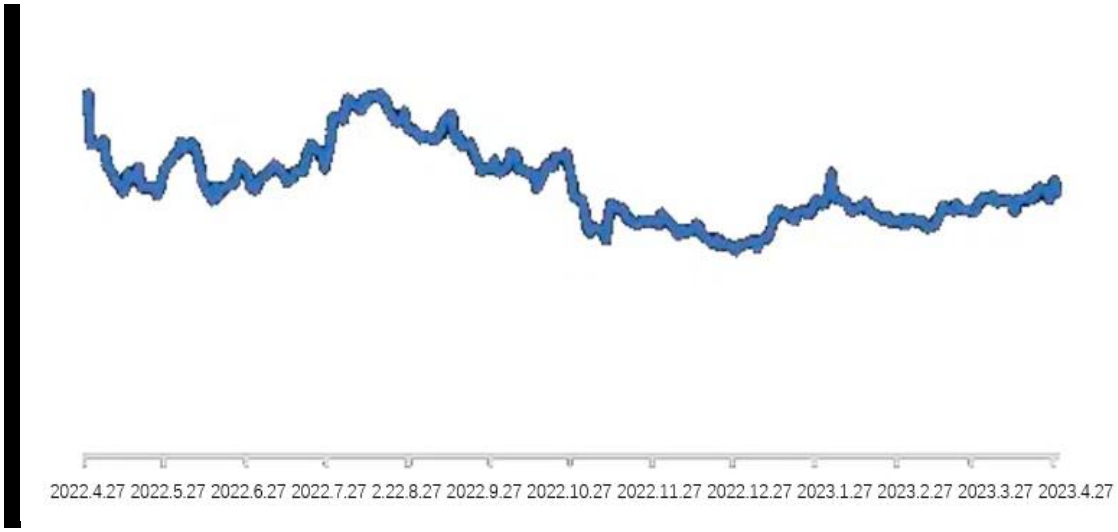

Figure 3: 52-week Share Pricing

4.3. Consensus Research

The recommendations given by various stakeholders can also give an indication of the prevailing market sentiment as well as give information concerning the valuation models. Prior to April 27, 2023, the average target estimate was at $134 with $90 and $165 being the low and high estimates respectively.

4.4. Comparison

To combine the dramatically opposite viewpoints into a reasonable range of the future values, several methodologies are used and Amazon's low, average and high enterprise values are illustrated in Figure 5 below.

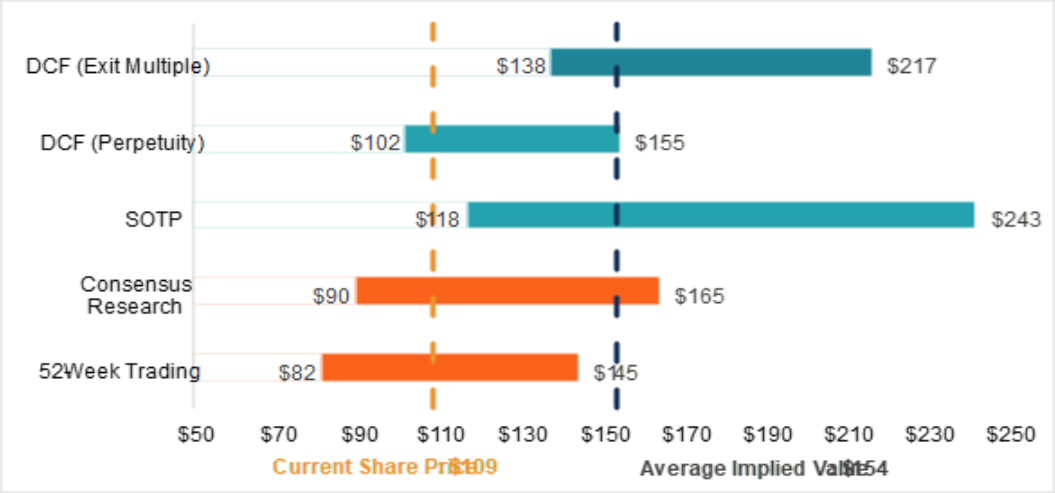

Figure 4: Equity value share per valuation method

5. Conclusion

Amazon's flexibility in various fields as well as its innovations are notable for having achieved remarkable growth and market domination. Throughout this dissertation, used techniques in comprehensive valuation models including the Discounted Cash Flow model and the Sum-of-the-parts model, beside carrying into consideration other factors including market predictions, price range within a one-year period and consensus reports. The estimation process delivers a saturated array of values, which may suggest the highly nuanced process of valuing such unexampled organization as Amazon.

From all the above methods, the DCF method with perpetuity turned out to be the most appropriate in arriving at the fair value for Amazon which ultimately gives a target price of $ 126. This method is more widely used and has been deemed superior to the before-mentioned method in assessing companies. However, looking at the point of view of trades and the average consensus research value given $134 for its 52 weeks trading prices, then it is probable that market has overvalued Amazon.

The study could benefit from integrating qualitative analyses, such as management effectiveness and brand strength, to provide a holistic view of Amazon's valuation. Future research should investigate the impact of geopolitical factors and regulatory changes on Amazon's market value. Additionally, exploring the role of environmental, social, and governance (ESG) criteria in valuation could offer valuable insights.

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