Research on Zoom's Investment Decisions Based on Multiple Valuations

Zhihao Guo*

Department of Management, Ocean University of China, Shandong, China

*Corresponding author: 19090041010@stu.ouc.edu.cn

Abstract. Due to the globally epidemic disease, the need for online working and studying has been increasing drastically more than ever. As a rising star and a leading company in the online meeting segment of internet industry, Zoom's stock price has been septupled in merely 18 months. However, with the recovery of covid-19 and resuscitation of offline work, Zoom's stock price has been fallen continually to only 38% higher than its original price. The valuation of Zoom's stock price can be a very useful flag for investors who want to invest in this company, since its stock price's volatility is especially big. Therefore, this research uses multiples valuation method to evaluate whether Zoom's stock price is over-valued or under-valued or fair. Comparing to Zoom's actual stock price and enterprise value, all the three valuation methods suggest that Zoom is highly over-valued right now. Therefore, it concludes that Zoom's stock price will be continually falling in the foreseeable future. It implies that investors should be careful when considering investing in Zoom, since Zoom is not making any material progress in current situation and evaluation results are really negative regarding Zoom's stock price.

Keywords: Zoom's valuation, Multiples valuation method, Adjustment to valuation results

1. Introduction

Since the epidemic disease broke out at the end of 2019, people have attached increasingly greater importance to finding a safe and convenient workplace. It was this time that Zoom started to take off as a promising online meeting application and quickly became a listed company in the US. After it appeared on the stock market, its stock price has risen sharply from $61 per share to $501 per share in only 18 months. However, the upcoming slump was disappointing and enduring for investors. Zoom's current stock price has fallen into $90.94 per share, but is the price fair? Does the low ebb have come to an end? These are the questions that make investors perplexed.

Till now, there are a variety of valuation methods and different methods fit different companies in diverse industries. Cornell(2020) stated that corporate value is created by selling implicit claims for more than it costs to honor them. It links the corporate social responsibility(CSR) with the company valuation and concludes that CSR will add or reduce value to the company depending on its social behaviors [1]. And Fan(2020) used the EVA method to evaluate Tsingtao brewery [2]. The EVA method calculates the sum of future EVA of the company and discount it by that company's WACC, where EVA equals to adjusted after-tax profit minus the product of invested capital and WACC of the company. This method requires an accurate estimate of target company's future profits. Otherwise, the valuation results can be very deviated from reality. Dated back to 2013, Simon and Hans(2013) stated that adjusted discount factors imply time-dependent discount rates [3]. Therefore, the commonly used valuation formula for perpetuities (Gordon formula) is no longer suitable to estimate unbiased terminal values. Jacob and Allen(2013) also commented on similar subject that the traditional discounted cash flows (DCF) valuation procedure used by financial analysts assumes that firms maintain a policy of fixed debt [4]. However, empirical evidence suggests that many firms rebalance their debt. Therefore, using the traditional discounting cash flow method may encounter several fundamental problems that are difficult to resolve. On the other hand, Yong(2009) stated in his essay that while discounting cash flow valuation method and PE valuation method are both effective, PE ratio valuation method is more practical [5]. But Yong also stated that PE ratio is not perfect either, it will be by risks and interest rate. To set this, Dragoş(2008) investigated that the P/E multiple is mainly driven by future earnings growth, whereas the major drivers of the P/B multiple are future return on common equity (ROCE) and growth in book value of equity [6]. For P/E multiple is also important the return on invested capital (ROIC). In the real world, financing decisions lead to the modification of both equity valuation multiples and entity valuation multiples. And in 2020, Andreas(2020) contended that estimating the market price of a company with multiples is common practice, especially when several multiples are used simultaneously [7]. As a practical use of this method, Kalsie et al.(2015)uses PE ratio and EV/EBITDA multiples and DCF method to evaluate the HUL and gives a comprehensive conslusion of the fairness of HUL's stock price [8]. What's more, EV/EBITDA multiple is not only useful in corporate valuation, it is also helpful for evaluating the operating efficiency of a company. Bhatnagar et al.(2014) investigated the internal link between the EV/EBITDA and operating efficiency [9]. To start with, Karagiannopoulos(2005) stated that Michael Porter's arguments for the new economy provide a useful starting point in the analysis of the environment [10]. And Sutherland(1999) analyzed telecommunications sector using Michael Porter's five forces model and provides a framework for such analyses [11]. Therefore, it can be a good way to start with analyzing Zoom's current situation using the Michael Porter's five forces model.

Therefore, this paper uses different multiples valuation methods to evaluate Zoom's current stock price, and gets to a conclusion that whether its stock price is over-valued or undervalued and whether the price will continue to go down. The valuation results can be a reference for investors to decide whether Zoom is worth investing.

The remaining of this paper is organized as follows. Section II and Section III analyzes the Zoom's investment value based on Michael Porter's five forces model and multiples valuation method. Section IV evaluates the results of Section II and Section III, and discusses the factors that facilitate the results and limitations that may restrain the results.

2. Environment Analysis of Zoom based on Michael Porter's five forces model

Zoom is a high-tech company that provides users with HD video conferences which was founded in 2011 by computer engineers from Cisco system and WebEx. It is like by European businessmen since it is convenience to use and its extraordinary image quality. Then, with the successful development, Zoom went public on April 18^{th}, 2019. Once the epidemic disease broke out, people's need for safe and convenient online meetings increased drastically. Therefore, Zoom realized exponential rate of growth with its wide spread all over the world. However, up to date, epidemic disease has been under control and the demand for online meetings slumped. Zoom is going through a hard time with the transition from booming to roughness.

This paper will use Michael Porter's five forces model to analyze Zoom's current situation. The outline is shown below in figure 1.

2.1 Bargaining power of suppliers:

Unlike traditional manufacturing enterprises, Zoom's products and services do not require raw materials. Zoom's suppliers mainly are some smaller Internet companies that provide Zoom with soft wares that can support Zoom's products and services like cloud computing. These companies' scales are not comparable to Zoom and with the rapid development of the Internet industry, competitions among these companies are quite fierce. Besides, in July 19^{th},2021, Zoom has claimed to acquire one of its suppliers Five9 and the acquisition is expected to take place in 2022. This acquisition is a upward merger and will definitely increase Zoom's bargaining power over its suppliers. In all, Zoom's suppliers' bargaining power is relatively weak since there are too many companies providing similar products and Zoom has taken action like upward merger to reinforce its current position.

2.2 Bargaining power of customers:

As it is mentioned above, companies in Internet industry provide similar products and services. Because of the homogeneity of these companies products, customers can choose whatever they want to use. And unlike commodities which have brand effects or ability to cultivate habits that may restrain customers to one or a few brands only, the transition cost of customers who want to switch to other online meeting applications is very low. Besides, most of the current customers of Zoom came from the breakout of the epidemic disease. It is no doubt that these customers may just quit using Zoom after everything comes back to normal. Therefore, customers' bargaining power is strong and it is of vital importance for Zoom to retain its customers.

2.3 Barriers to potential competitors:

Although companies in Internet industry do not require much start-up capital, there are still barriers for potential competitors who want to enter the online meeting segment. Firstly, although the transition cost for customers is very low, brand awareness has been built. For now, while Zoom is widely used in European and American market, Tencent meeting has taken up the Chinese market. When thinking of having an online meeting, the first name comes to one's mind would be Zoom for Americans and Tencent meeting for Chinese. It is hard to seize market share in this situation. Secondly, many larger companies are developing their own online meeting applications, such as Microsoft, Cisco system and so on. Potential competitors are not comparable to these companies no matter in sense of capital, technology or brand awareness. Thirdly, companies in Internet industry provide similar products, so it is difficult to make themselves stand out from all the competitors in the same industry. To sum up, threat of potential competitors is not worth paying much attention.

2.4 Threat of substitutes:

There is not much threat from substitutes since there is no substantial substitute for Zoom. There are only two options for a meeting—whether online or offline. And having a meeting offline is just a regular business and it can not be called as a substitute. Therefore, the threat of substitutes can be ignored.

2.5 Threat of competitors:

With the booming of online meeting services, many large high-tech companies like Microsoft, Adobe Inc. and Cisco system have been managing to seize some market share from Zoom. These companies are bigger and stronger than Zoom, which can be huge threats for Zoom. But the market is almost saturate and is expected to shrink sharply in the near future. These large companies may not spend much doing further research and development. Besides, Tencent meeting as a "eastern Zoom" in China has taken over the Chinese market once the covid-19 broke out and has taken action to expand its business range. However, Tencent meeting and Zoom has not penetrated much in each other's market. Therefore, the threat of competitors do exist but is not so urgent considering the facts and the future trend.

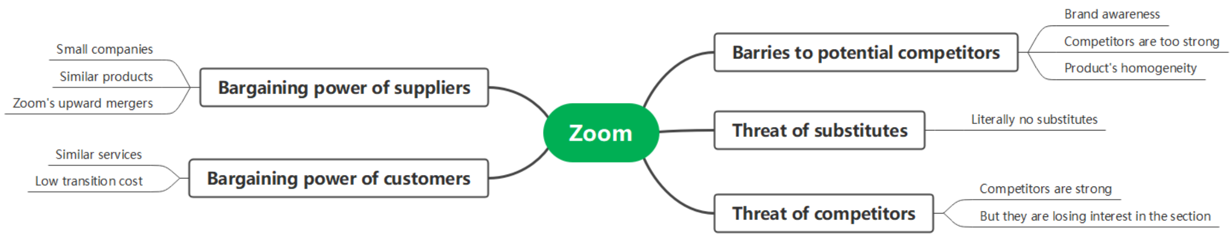

Figure 1. Framework of Zoom's five forces

Generally speaking, the most urgent thing for Zoom to do is to attract its current customers from switching to other online meeting services and retain as many customers as possible when the epidemic disease is under control.

3. Investment analysis of Zoom based on Multiples Valuation Method

This paper uses multiple valuation model to evaluate Zoom's stock price and enterprise value. Multiple valuation model is a typical method in financial criteria. There are mainly three multiples which are P/E ratio multiple, P/S ratio multiple and EV/EBITDA multiple. This model functions in the following steps:

1)Get the target company's financial statements and three ratios mentioned above. Do some research to get to know more about the company like its strategies, main businesses, company structure and so on.

2)Select a few other companies that are in the same industry as the target company. Get these companies financial data and key ratios to compare with the target company. If these companies are similar or identical to target company's financial situations and future development, these companies can be a peer group for the target company. Otherwise, if these companies are significantly different from the target company whether in scale, future outlook or operational model, then these companies may have to be winnowed since they may affect the accuracy of the valuation.

3)Once the peer group is decided, all the three ratios for the peer group should be calculated and get the average amount. Then, multiply this average amount with each of the three ratio's denominators of the target company and the product is the estimated amount of the numerator, which says stock price(P/E, P/S) and enterprise value(EV/EBITDA).

For the preliminary selection of Zoom's peer group, Microsoft, Adobe, Cisco, Slack and Tencent are the main competitors of Zoom. Microsoft is a worldwide brand for its computer software "Windows" series. Its business has reached to different areas and since the epidemic disease broke out, Microsoft has entered into the online meeting industry. Adobe, Cisco and Tencent are similar to Microsoft's situation. They all started up in another area other than online meeting, and then expand their business scales to other fields. But these three companies size is much smaller comparing to Microsoft. Slack is a company who made its fortune primarily in providing online meeting services. However, it has been developing slowly in the past few years and its market share in online meeting slumped drastically since Zoom appeared. Now, Slack is still an unlisted company and its size is not even comparable with Zoom.

For further compare, data derived from Yahoo Finance are listed below.

Table 1. Zoom's and its main competitors' key ratios

	Zoom	Adobe Inc.	Cisco Systems	Microsoft	Tencent	Slack
Mkt($bil)	27.21	193.56	210.20	1,996	447.68	0.86
Profit Margin(ttm)	33.55%	29.90%	22.94%	47.63%	40.14%	Not available
Operating Margin(ttm)	27.57%	36.72%	27.35%	42.56%	22.11%	Not available

From Table 1, it is clear that two companies is not so proper as a member of Zoom's peer group. On the one hand, Microsoft is too strong to be compared with Zoom. No matter is its size or its profit margins, Microsoft has shown the definition of world-leading entity. Its market capitalization is about 72 times bigger than Zoom and its profit margins are the highest of the above 7 companies. Therefore, Microsoft cannot be included in Zoom's peer group. On the other hand, Slack is too puny to be a member of Zoom's peer group. Its market capitalization has not reached $1 billion yet. And although its profit margins are not available right now, financial reports has concluded that the future for Slack is not optimistic. Therefore, as a company that is on its way down, Slack cannot be a peer group of the rising star Zoom.

In conclusion, Adobe, Cisco and Tencent are chosen as the peer group of Zoom. In the following research, these three companies' P/E ratios, P/S ratios and EV/EBITDAs will be averaged and set as the multiples to evaluate Zoom's stock price and enterprise value. If the product of the multiples and Zoom's factors is larger than the actual value, then Zoom may be undervalued. If not, Zoom may be overvalued currently.

Table 2. Zoom's and its peer group's multiples

	Zoom	Adobe Inc.	Cisco system	Tencent	Average
P/E Ratio	18.84	38.58	17.44	13.1	23.04
P/S Ratio	6.33	11.53	3.99	5.25	6.92
EV/EBITDA	18.04	27.27	11.32	11.09	16.56

(Data source: Yahoo Finance)

Now that the actual ratios for Zoom and its peer group are available(shown in Table 2), multiples valuation function can be used to calculate the valuation price of Zoom. The processes are as follows and the results are shown in Table 3.

$$\text{Peer group's}\frac{P}{E} = \frac{P_{Zoom}}{EPS_{Zoom}} => P_{Zoom} = \text{Peer group's}\frac{P}{E} \times EPS_{Zoom} = \$\ 31.80 \tag{1}$$

$$\text{Deviation} = \frac{\text{Actual price} - \text{Valuation}}{\text{Valuation}} \times 100\% = \frac{\$90.94 - \$31.80}{\$31.80} \times 100\% = 65.04\% \tag{2}$$

$$\text{Peer group's}\frac{P}{S} = \frac{P_{Zoom}}{Sales_{Zoom}} => P_{Zoom} = \text{Peer group's}\frac{P}{S} \times Sales_{Zoom} = \$\ 28.39 \tag{3}$$

$$\text{Deviation} = \frac{\text{Actual price} - \text{Valuation}}{\text{Valuation}} \times 100\% = \frac{\$90.94 - \$28.39}{\$28.39} \times 100\% = 68.79\% \tag{4}$$

$$\text{Peer group's}\frac{EV}{EBTIDA} = \frac{EV_{Zoom}}{EBITDA_{Zoom}} => EV_{Zoom} = \text{Peer group's}\frac{EV}{EBTIDA} \times EBITDA_{Zoom} = \$\ 19.54 \text{ billion} \tag{5}$$

$$\text{Deviation} = \frac{\text{Actual price} - \text{Valuation}}{\text{Valuation}} \times 100\% = \frac{\$27.21 - \$19.54}{\$19.54} \times 100\% = 28.19\% \tag{6}$$

Table 3. Valuation results

	Zoom's Factor	Valuation	Actual Price	Deviation
Earnings	1.38	31.80	90.94	65.04%
Sales	4.1	28.39		68.79%
EBITDA	1.18	19.54	27.21	28.19%

(Data source: Yahoo Finance)

1) Based on the P/E ratio multiple method, Zoom's stock price is estimated at $31.80 per share. This amount is lower than the actual price $90.94 per share.

2)When evaluated by P/S ratio multiple method, Zoom's stock price is estimated at $28.39 per share. It is also much lower than Zoom's actual stock price.

3)As for the EV/EBITDA multiple method, Zoom's enterprise value is estimated at $19.54 billion.

4. Investment Decisions on Zoom

Comparing to its actual enterprise value $27.21 billion, the calculated amount is still a bit lower.

From the calculation results above, all the three methods reveal the same conclusion that Zoom is over-valued right now. But Zoom’s stock price and enterprise value are over-valued at different extents. Stock price is over-valued at 65% to 68%, while enterprise value is only over-valued for 28%. Therefore, Zoom’s stock price is highly over-valued and is expected to fall continually in the foreseeable future. Investors who have already held Zoom’s shares should consider sell them in the secondary market, and investors who are interested in investing in the on-line meeting companies should consider buying Microsoft’s, Tencent’s or Adobe’s stocks instead of Zoom’s.

This valuation has not excluded peer groups’ other businesses which means errors exist in the valuation—such as Microsoft and Tencent, these two companies’ main businesses are soft wares and video games. On-line meeting is just a minor segment of their whole scale. Therefore, when taking companies like these as peer groups, the valuation result cannot be fully trusted. For future researches, if the financial information of on-line meeting segment is available, it will be much proper to use these companies as peer groups to manipulate into multiples valuation method.

The results conclude that Zoom is overvalued currently. But it should be noticed that Zoom’s stock price and enterprise value are overvalued to different extents. There are two main reasons for this:

(1)Zoom is a high-tech company and its fixed assets like land, buildings, facilities and even employees are very low comparing to comprehensive companies like its peer group. Therefore, its depreciation charge, costs, taxation(high-tech companies’ tax rate is lower) and expenses are relatively much lower which manifests in greater profit margin, and eventually makes Zoom’s EBITDA higher.

(2)The chosen companies in the peer group are all companies with a long growth and their businesses have already diversified into different industries. Tencent, for example, creates its profit mainly from its video games and Tencent meeting is only a small part of its business as a whole. Therefore, enterprise value of the companies in the peer group is reflecting each company’s business as a whole, making the average EV/EBITDA much higher than their online meeting services.

5. Conclusion

This paper investigates the fairness of Zoom’s stock price by using the multiples valuation method. There are mainly three findings on the results. Firstly, Zoom’s business environment is kind of friendly in general, and the competition in the industry is also moderate. But the decreasing customers is a major problem for Zoom. Zoom has to figure out new strategies to retain its customers. Otherwise, Zoom will have a hard time losing customers and revenues. Secondly, Zoom’s stock price is highly overvalued by 65% to 68% percent. Thirdly, Zoom’s enterprise value is overvalued by 28%. This paper is inspirational for researches that focus on the valuation and investment decisions of Zoom and it also give a primary attitude towards Zoom’s future development which is not optimistic. The multiples valuation method can be adopted to different companies in various industries as long as there are enough proper companies to constitute the peer group of the target company.

Apart from what mentioned above, here are some suggestions that this paper would like to convey. Firstly, from the perspective of Zoom, Zoom should take action to maintain its customers, such as personalized customization and special treatment for memberships. And predictably, since the epidemic disease is about to over and in many places the schools and workplaces are available for use, citizen’s usages for Zoom will fall drastically. Zoom also need to consider expanding its business range, like diversification or mergers and takeovers to increase its market share. Secondly, from the investor’s perspective, it will be a hard time for investors who have Zoom’s shares at hand. As evaluated that Zoom’s stock price is highly over-valued, it can be predicted that Zoom’s stock price will continue to fall and may not bounce back in the foreseeable future. Therefore, it is sensible for investors to sell Zoom’s shares as soon as possible to stop loss. And for those who look forward to buying some shares in the Internet industry, it is recommended that large and famous companies like Microsoft is worthy to buy while it is much riskier to buy shares of companies that are on their way down like Zoom.

However, due to the availability of complete financial data, this paper does not investigate much about the future trend of Zoom, and only gives a brief forecast. Future studies about Zoom's further development and trend of stock price can be done based on additional financial and managerial information of Zoom.

References

[1] Cornell B, Shapiro A. Corporate Stakeholders, Corporate Valuation, and ESG[J]. Social Science Electronic Publishing.

[2] Fan W. Introduction to Eva Method and Corporate Valuation - taking Tsingtao Brewery as an Example[C]// IOP Conference Series Materials Science and Engineering. 2020:052128.

[3] Elsner, S., Krumholz, HC. Corporate valuation using imprecise cost of capital. J Bus Econ 83, 985–1014 (2013). https://doi.org/10.1007/s11573-013-0687-z

[4] Oded J, Michel A. Why Does DCF Undervalue Equities?[J]. Social Science Electronic Publishing.

[5] Yong Chen, Research on the standard of PE valuation on stock price[D]. East China Normal University,2009.

[6] Dragoş MÎNJINĂ, P/E AND P/B MULTIPLES AND COMPANY'S FINANCIAL STRUCTURE, Scientific Annals of the Alexandru Ioan Cuza University of Iasi: Economic Sciences Series 2008

[7] Schueler A. Valuation with Multiples: A Conceptual Analysis[J]. Journal of Business Valuation and Economic Loss Analysis, 2020, 15(1).

[8] Kalsie, Anjala, Arora, Ashima. Valuation of HUL. 2015.

[9] Bhatnagar D, Bhatnagar C S, Bhullar P S. Operating efficiency and firm valuation: evidence from India[J]. Industrial Engineering Letters, 2014, 5(1):19.

[10] Karagiannopoulos G D, Georgopoulos N, Nikolopoulos K. Fathoming Porter's five forces model in the internet era[J]. Info, 2005, 7(6):66-76.

[11] Sutherland E. Lobbying and litigation in telecommunications markets – reapplying Porter's five forces[J]. info, 1999.