

Investment Recommendations for Three Electronic Commerce Businesses and Their Portfolio

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Abstract. Electronic commerce firms are an important part of Internet businesses, which have been at the center of growth in recent years, and a study of the investment value of typical e-commerce firms is warranted. The article collects relevant information about Amazon, Alibaba, and JD. And the article analyses Macro development trends. The article calculates multiple sets of base ratios and analyzes the meaning of the base data, with the aim of providing different investment recommendations for different investors. The article constructs corresponding portfolios in order to. The analysis and research in the article found that in the portfolios that constructed by the three companies, it is recommended to invest all money in Amazon stocks and different investment recommendations are given for nine different investors. Readers can also use the model and data in the article to analyze other stocks, build a portfolio, and choose a suitable company or portfolio to invest in.

Keywords: electronic commerce company, invest, CAPM, portfolio.

1. Introduction

The global e-commerce market expanded rapidly during the COVID-19 pandemic, outpacing the retail market. The dividends of the COVID-19 pandemic are now fading, but the growth potential of the e-commerce giants remains strong. There is still room for profitable investment in the sector. According to Statista, the U.S. e-commerce market will reach \$940.1 billion in revenue by 2023. Chinese cross-border e-commerce imports and exports totaled roughly \$301.4 billion in 2022, a year-on-year increase of 9.8%, and are projected to reach \$421.4 billion in 2024.

The article will use case studies and literature analysis to analyze the information and data of Amazon, Alibaba, and JD which are three typical companies. The article constructs the portfolio of the three companies. Then, the article will provide many suggestions to investors.

The remainder of the article is organized as follows. Section 2 presents the literature review. Section 3 presents basic information about the three companies. Section 4 talks about the analysis of the essential and important data of three typical electronic commerce companies and provides a few suggestions to different investors. Section 5 provides the portfolio of the three companies. The conclusion follows in Section 6.

2. Literature Review

There are many scholars have analyzed multiple aspects of investment in the three companies. Chen Liuyin analyzed the intrinsic value of Alibaba using financial indicators, equity free cash flow valuation method, price-to-book ratio, and price-to-sales ratio valuation method [1]. Sun Chunhui and Wang Zengyu used the explanation of the variable interest entity to analyze the risk and the value of Alibaba [2]. He Yan paid attention to the business model of Amazon and analyzed the investment line of Amazon [3]. Deng Ying compared the business model of Amazon and Alibaba and considered that Alibaba had many aspects that need to change [4]. Zhang Yan researched the profit model and income distribution of JD and believed that JD's profit model gave it a core competency, but it also gave it a lower gross margin and higher financial risk [5]. Zhang Xinyan adopts the extreme value theory method to study the Value at Risk of JD and Alibaba's daily logarithm return rate. Due to

differences in business models, management models, and platforms, the daily logarithm return rate of JD and Alibaba's stocks do not rank the same in terms of Value at Risk over the four quarters [6].

3. Data Collection

Amazon, Alibaba, and JD are three famous electronic commerce companies. Amazon is the world's largest online retailer with the widest variety of products. Ali Baba provides a platform for small and medium-sized enterprises and individuals to trade directly with consumers. JD directly provides computers, communications, and consumer electronics to consumers.

3.1. Amazon



Figure 1. The fluctuation of the stock price of Amazon over last year

The figure shows the fluctuation of the stock price of Amazon over the last year. Amazon's stock has risen significantly over the past few years due to the COVID-19 pandemic dividend. In 2022, as the COVID-19 pandemic dividend begins to fade and the profitability of the core business declines, coupled with Amazon's first quarterly loss since 2015, investors have begun to sell the stock. Then, a year later in 2023, the market gradually picks up, and combined with a strong 2022 earnings report, Amazon's stock price gradually rises again. Amazon stock is still on an upward trend.

3.2. Alibaba



Figure 2. The fluctuation of the stock price of Alibaba over the last year

The figure shows the flow of the stock price of Alibaba over the last year. Over the past year, Alibaba's stock price has also experienced significant volatility. In August 2022, according to Alibaba's financial statements, Alibaba's individual businesses continued to grow, while revenues and profits from its main businesses, such as retail and entertainment, declined to varying degrees. In addition, Alibaba was placed on the SEC's "pre-delisting" list, so its stock price plummeted by 11 percent. In November 2022, Alibaba's share price showed a general upward trend, driven by the adjustment of China's COVID-19 pandemic policy, macroeconomic recovery, and other favorable factors, which has continued to this day.

3.3. JD



Figure 3. The fluctuation of the stock price of JD over the last year

The figure shows the fluctuation of the stock price of JD over the last year. JD has had several notable share price swings over the past year, mainly at these points in time when the company's founder made a new move or the company disclosed relevant financial statements. In September 2022 there was a significant drop in the stock price, mainly due to the transfer of equity in JD-related companies by JD's founder, Liu Qiangdong, with a corresponding drop in the share price of 8 percent. In March 2023, when JD's new policy of "tens of billions of RMB in subsidies" raised concerns about a price war. Besides, weakened consumption due to the COVID-19 pandemic, caused the shares to plummet by 11 percent. Since then, JD's shares have remained at a lower level.

4. Financial Analysis

The article analyzes the data in three parts and makes different recommendations for different types of investors.

4.1. Risk Ratio

Table 1. The risk ratios of AMZN, BABA, and JD

<i>Name of companies</i>	<i>AMZN</i>	<i>BABA</i>	<i>JD</i>
Market Cap (USD)	1.357T	262.52B	63.671B
Beta (5Y Monthly)	1.26	0.65	0.47
Debt ratio	2.1681	0.5611	1.1715
Current ratio	0.92	1.81	1.36

Table 1 shows four different risk ratios of the three companies. The market capitalization of the three companies is more than 15 billion dollars, so index investors want to invest in the three companies.

The beta risk of AMZN is more than 1 and higher than the average risk, so AMZN is sensitive to the change in the market. The beta risk of BABA and JD is less than 1 and lower than the average risk, so the two companies are not sensitive to the change in the market.

The beta risk of the three companies is shown below: AMZN>BABA>JD, and the Debt ratio of the three companies is listed below: AMZN>JD>BABA. So, the risk of AMZN is the highest. Therefore, risk-averse investors will not want to invest in AMZN.

The current ratio of AMZN is 0.92, which is less than 1, but the credit rating of AMZN is AAA. Thus, from another perspective, the risk of AMZN is not too high.

4.2. Profitability Ratio

Table 2. The profitability ratios of AMZN, BABA, and JD

<i>Name of companies</i>	<i>AMZN</i>	<i>BABA</i>	<i>JD</i>
TA T/O	0.1515	0.5803	0.1636
Profit Margin	0.0082	0.0838	0.0187
ROA	0.0257	0.0374	0.0191
ROE	0.0733	0.0595	0.0298

Table 2 shows four different profitability ratios of the three companies. The ROA of the three companies is listed below: BABA>AMZN>JD. Thus, the most profitable company is BABA. The ROA of AMZN is lower, but the ROE of AMZN is higher than both BABA and JD, so AMZN is highly leveraged.

4.3. Market Ratio

Table 3. The market ratios of AMZN, BABA, and JD

<i>Name of companies</i>	<i>AMZN</i>	<i>BABA</i>	<i>JD</i>
PE	62.11	11.17	14.93
PB	7.26	1.85	2.22
Dividend yield	0	0	1.63%
PEG	5.16	2.09	0.79
DCF	9.2300	7.0600	-4.8500
FCF	0.58	-2.54	-0.37
Insider Buying	9.72%	0.01%	6.08%
Stock Buyback	0	0	0
Stock Price 7/28/2023	132.21	100.55	40.53
50-Day Moving Average	126.21	87.94	36.31
200-Day Moving Average	105.35	89.33	45.15

Table 3 shows eleven different market ratios of the three companies. All three companies have a PE greater than 10 and the PB of the three companies is more than 1, The dividend yield of all companies is less than 3 percent. Thus, value investors and income investors will not invest in these stocks.

Only the PEG of JD is less than 1, so PEG investors will invest in the JD stock.

The DCF of AMZN and BABA is higher than their own FCF, so DCF investors will buy them, but they will not pay attention to the JD.

Insider buying investors will buy the AMZN and JD because the insider buying of the AMZN and JD are higher than 4%.

The stock buyback of the three companies is zero. So, stock buyback investors do not want to buy them.

The stock price of AMZN is higher than its 50-day moving average and 200-day moving average. And the 50-day moving average of AMZN is higher than its 200-day moving average, so momentum investors will buy it. The stock price of BABA is higher than its 200-day moving average, but the stock price of JD is lower than its 200-day moving average. Therefore, momentum investors will buy the BABA and not pay attention to the JD.

Table 4. The investment recommendations of AMZN, BABA, and JD

<i>Name of companies</i>	<i>AMZN</i>	<i>BABA</i>	<i>JD</i>
value investor			
income investor		invest	
PEG investor			invest
Index investor	invest	invest	invest
Ratio Analysis investor		invest	
DCF investor	invest	invest	
Momentum investor	invest	invest	
Insider buying investor	invest		invest
Stock buyback investor			

Finally, the investment recommendations are as above (Table 4).

5. Portfolio

The article uses the CAMP model to construct a portfolio of the three companies [7-8]. Firstly, the article collects the monthly return data of the three companies in the past year and calculates some essential data, such as the average monthly return, the standard deviation, correlations, and so on [9]. Second, the article calculates some important data about the CAPM model, such as Beta, expected excess return, and so on. Third, the article uses the data and programming solver to construct the portfolio [10].

Finally, the portfolio suggests that investors need to invest all their money in AMZN. AMZN has a weighting of one in the portfolio. The investment weighting for both BABA and JD in the portfolio is zero. The article acquires information about the portfolio. The average monthly return of JD is a negative number, so the portfolio will not contain the JD. The portfolio of BABA is twice that of AMZN, but the standard deviation of BABA is also twice that of AMZN. The standard deviation means the actual risk. Thus, the portfolio will not contain BABA.

6. Conclusion

According to the prediction of the market development, the e-commerce industry still has a better development prospect and has the value of investment, so the article chooses three famous stocks in the e-commerce industry to analyze and construct the investment portfolio, which is committed to giving different types of investors the corresponding investment advice. The article uses case studies and literature analysis to find information and analyze the three stocks.

First, the article analyzes each of the three stocks from three perspectives --risk, profitability, and market ratio. And offers different investment recommendations for different investors' investment preferences. Index, DCF, Momentum, and Insider buying investor will buy AMZN. Index, Ratio Analysis, DCF, and Momentum investors will invest in the BABA. PEG, Index, and Insider buying investors will buy the JD. Second, the article uses the CAPM model to construct the three stocks into a portfolio that provides the optimal portfolio. The portfolio of the three companies shows that AMZN has a weighting of one in the portfolio and the investment weighting for both BABA and JD in the portfolio is zero.

There is also some limitation in this article. All three stocks mentioned in the article only used data from the past year, because the background period of the COVID-19 pandemic was more specific and the positive and negative effects of the COVID-19 pandemic are fading, so data from the COVID-19 pandemic period were not used. At the same time, due to personal preference, two Chinese e-commerce companies are included in the three stocks selected, and not much attention is paid to e-commerce companies in other countries and regions.

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