

An Empirical Analysis of the Factors Affecting the Yield of Blue Chips in the A-Share Market

Shuaipeng Li

School of Mathematical Sciences, Huaibei Normal University, Huaibei, Anhui 235000, China

Abstract. With the continuous development and improvement of the domestic stock market, the stock market has emerged such as blue-chip stocks, red-chip stocks, and blue-chip stocks. This paper takes the blue-chip stocks in the A-share market as the research object, selects the blue-chip stocks in the 2015-2017 Shanghai-Shenzhen 300 Index as the research sample, and uses the Logit model to explore the influencing factors of the blue-chip stock yield in the A-share market. The empirical results show that the factors affecting the yield of blue-chip stocks in the A-share market are market interest rate, company size, net asset growth rate, shareholding structure and valuation.

Keywords: blue chip stocks; yield; Logit model.

1. Introduction

China's a-share market, the full name of which is China's RMB common stock market, is a domestic stock market that is listed in China and can only be purchased by domestic investors. Blue-chip stocks are ordinary stocks issued by companies with good operating conditions and relatively good dividend payouts in the a-share market. The name of "blue-chip" comes from the chips in the casino, and the blue chips are the most valuable.

In the study of stock market at home and abroad, many scholars have put forward their own views on the yield of blue chips. Among them, Schwert (1989) analyzed the impact of macroeconomic factors on stock returns on the impact of macroeconomic factors on stock returns[1]; George Tauchen (1996) analyzed the effects of leverage and stocks through research. As well as the correlation between stock price volatility, it is concluded that the fluctuation of blue-chip yields comes from the changes of stocks in the stock market; Hodgson and Masih (1999) deeply analyze small businesses from the perspective of risk and cost of stock market trading. There is a positive correlation between stock returns and large corporate stock returns [2]. Zhu Wuxiang and Wang Lianheng (2001) derived the interaction between the blue-chip stock market and the company's financial characteristics according to the Dow Jones Industrial Index [3]. Tan Yawen (2012) uses regression equations for statistical analysis. The macro environment has a significant effect on stock returns. The shareholding structure, state-owned shares, and bank interest rates are all negatively correlated with stock returns [4].

2. Research Design

2.1 Sample Selection and Data Source

This paper takes 2015-2017 as the research period and selects blue-chip stocks in the a-share market as the research object. Some blue-chip stocks in the Shanghai and Shenzhen 300 Index are used as research objects. In order to ensure the comprehensiveness and safety of the samples and improve the accuracy of the research results, this paper Samples were selected according to the following conditions: companies that had negative earnings for three consecutive years were excluded; companies that had undergone restructuring, restructuring, and merger of large companies within three years were excluded; companies that exceeded 50% of the company's share transfers in 2015-2017 were excluded. Select the sample of operating conditions surplus and regular distribution of dividends for research. The data in this paper comes from wind database and Oriental Fortune Network.

2.2 Variable Definition

(1) Market interest rate

It refers to the interest rate determined by the supply and demand relationship in the capital market. Generally speaking, it refers to the London Interbank Offered Rate (LIBOR), the US Federal Funds Rate (Federal Funds Rate), and China also has the Interbank Market (SHIBOR), and its interest rate is also the market interest rate (Rate) [5].

(2) Net asset growth rate

One of the indicators of the company's annual report, semi-annual report, monthly report and other data that significantly reflects the company's growth is the Net Assets Growth Rate. The net asset growth rate is equal to the net assets at the beginning of the period and the net assets at the beginning of the period. The ratio represents the ability of a company's assets to maintain and increase value.

Equity structure

The structure of corporate governance is the specific form of ownership structure. Equity separation or equity concentration plays a decisive role in the development of the company. The ownership structure has two meanings. The first layer means equity concentration, which means that the equity is highly concentrated or Equity is highly fragmented; the second layer is the shareholding structure, which is the proportion of state shareholders, legal person shareholders and public shareholders.

The variables studied in this paper are shown in Table 1.

Table 1. Selection and meaning of variables

Explain the variable name	Explanatory variable definition
R	Market interest rate
Se	Company Size
GR	Net asset growth rate
Co	State stocks as a percentage of all shares
LPS	Legal person shares as a percentage of all shares
Cap	Foreign shares accounted for the proportion of all shares
Ps	Social public shares as a percentage of all shares
Go	Valuation
BR	The shareholding ratio of the company's first shareholder
CR	The proportion of the company's top three shareholders

2.3 Model Hypothesis

The explanatory variables studied in this paper are market interest rate, company size, net asset growth rate, state shares, legal person shares, foreign shares, public shares, valuation, shareholding ratio of the company's first shareholder, and shareholding ratio of the company's top three shareholders. And the blue-chip stocks in the a-share market are explanatory variables. The correlation analysis of explanatory variables in Table 2 is obtained by analyzing the sample of blue-chip stocks in the a-share market in 2015-2017.

Hypothesis 1: There is a negative correlation between market interest rates and blue-chip stock returns in the a-share market.

Market interest rate is a magic weapon used to regulate market transactions. Both the volume of stocks and the company's rate of return are inseparable from market interest rates. In terms of long-term debt, subordinated debt and rediscounting, market interest rates are used. The fluctuations are related. Therefore, as the market interest rate increases, the yield of blue chips should fall.

Hypothesis 2: The size of the company is significantly positively correlated with the yield of blue-chip stocks in the a-share market.

Investors tend to favor larger companies with large investment scales, such as Wanda and Alibaba. The general business scope is not only about the same field. Most large companies are involved in a wide range of fields and the scale of operations is relatively large. At the same time, its ability to

withstand risks is relatively strong, so the stock return rate is positively correlated with the size of the company.

Table 2. variable correlation analysis[6]

Explanatory variables	AVG	MID	MIN	MAX
Se	11	9	5	12
BR	0.4564	0.4844	0.0598	0.85
CR	0.5613	0.581	0.141	0.945
GR	0.2678	0.2533	0	0.732
Co	0.4119	0.49	0	0.822
LPS	0.1161	0.071	0	0.8112
Cap	0.05	0	0	0.523
Ps	0.04	0	0	0.5

Hypothesis 3: There is a positive correlation between the growth rate of net assets and the yield of blue-chip stocks in the a-share market.

The growth rate of a company is directly linked to the growth rate of net assets. Generally speaking, people analyze the business growth of a company by analyzing the growth rate of the company's net assets. The higher the company's net asset growth rate, the better the company's development prospects. The more it attracts more commercial investors to invest, on the contrary, if the company's net asset growth rate is at the lowest level in the same industry, the company's operating conditions and development prospects are relatively embarrassing, and investors often do not choose when investing in enterprises. To invest in such companies, the net asset growth rate is an important variable for the yield of blue chips.

Hypothesis 4: The ratio of state stocks to all stocks is positively correlated with the yield of blue stocks in the a-share market.

The greater the proportion of state-owned shares, the stronger the social role, the greater the social responsibility, but the state-owned shares are divided into tradable shares and non-negotiable shares according to the circulation pattern. The tradable shares are similar to ordinary shares issued by listed companies. Stocks are stocks with certain restrictions. When non-negotiable stocks are converted into tradable stocks, state holdings as institutional investors have the right to participate in management, thus affecting the yield of blue-chip listed companies.

Hypothesis 5: The proportion of legal person shares in all shares is significantly positively correlated with the yield of blue-chip stocks in the a-share market.

The main purpose of corporate shareholders' equity investment in enterprises is to maximize the interests. Therefore, the income of investment is often placed first. However, the business investment behavior of legal shareholders often has serious violations of cross-investment and internal transactions. For the listed company's operating conditions, stock prices and other aspects of the impact, the legal person shareholders through a large number of acquisition of equity once the company's absolute voice, it is easy to form an insider to control the company's development.

Hypothesis 6: The proportion of foreign shares in all shares is negatively correlated with the yield of blue chips in the a-share market.

Many domestic listed companies can attract foreign investors to participate in equity investment. The injection of foreign capital has a significant effect on the company's influence. It may also introduce advanced management concepts for enterprises. On the contrary, there may be cases where the company's board of directors is not perfect. Controlling the company's system makes it impossible for foreign investors to participate in the management of the company. As a result, there is a negative correlation between the stock return rate and the proportion of foreign stocks.

Hypothesis 7: There is a positive correlation between the proportion of public shares in all shares and the rate of return on blue-chip stocks in the a-share market.

The shares raised by the listed company for the public when it is established by the way of raising and setting up also refer to the shares that can be listed and circulated when the public public invests

in the company according to law. The more public shares there are, the weaker the concentration of equity investment, the stronger the dispersion of equity, the more sound the function of the shareholders' meeting, the more favorable the development of listed companies, the better the development prospects of the company and the stock yield.

Hypothesis 8: The valuation is significantly positively correlated with the yield of blue-chip stocks in the a-share market.

Behind all stock pricing is the discounted cash flow valuation method. This is a relatively complicated process. There are many factors influencing the valuation. There is no globally unified standard, but all valuations are centered around the intrinsic value of the stock. Fluctuations, changes in the economic situation, adjustment of macroeconomic policies, changes in supply and demand, etc. will all affect the future earnings of listed companies, causing changes in the intrinsic value of stocks. As a result, higher-value stocks and blue-chip stocks also have yields. The higher.

2.4 Model Research

2.4.1 Logit Model Concept

The Logit model is one of the best used models at present, and it is also the earliest discrete selection model in the world. The reason for its wide application is mainly due to the dominant features of probabilistic expressions. The application model is fast and easy to solve problems. When the model selection set has not changed, but only when the variables change, it is convenient to solve the selected probability [7] of each selection branch of each selection branch in the new environment. The logical distribution formula is as follows:

$$P(Y = 1|X = x) = \exp(x' \beta) / (1 + \exp(x' \beta)) \quad (1)$$

2.4.2 Building a Model

In this paper, the econometric method is used to express the model of the research object in the form of Logit model, and the following model is established:

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 Se + \beta_2 BR + \beta_3 CR + \beta_4 GR + \beta_5 Co + \beta_6 LPS + \beta_7 Cap + \beta_8 Ps + \beta_9 R + \beta_{10} Go + \varepsilon \quad (2)$$

among them β_0 Is a constant term, $\beta_1, \beta_2, \dots, \beta_{10}$ Represents an explanatory variable. When other explanatory variables are constant, the natural logarithm changes caused by each additional unit of the explanatory variable. ε Represents the residual term [8].

2.4.3 Correction and Verification of the Model

This paper selects the CSI 300 stock index listed on the a-share market from January 1, 2015 to December 31, 2017 as a sample, deletes the data imperfections and abnormal samples, and finally selects 153 listed companies. , using spss software for data processing. The regression results of blue-chip stock yields for each explanatory variable are shown in Table 3.

Table 3. Regression results of blue-chip stock yields for each explanatory variable

Explanatory variables	Parameter value	m value
R	-0.234(***)	-4.654
Se	-0.567842(***)	-0.336
GR	0.027724	4
CR	-3.12E-08	-0.62
BR	-0.286734	-0.73
Co	-3.044218(**)	-0.94
Go	1.523417(**)	2.23
LPS	-0.013392	-0.29
Cap	0.546736(*)	0.71
Ps	0.0085312	0.369
R ²		0.1774
square		142.73
Log likelihood value		-311.62839

Note: *, **, *** indicate significant at 10%, 5%, and 1%, respectively.

2.5 Main Conclusions

On the surface of the regression results, the effects of a single explanatory variable on the explanatory variables are as follows:

1. The net asset growth rate has a significant effect on the yield of blue chip stocks. The m value of the interpreted variable is the largest and positive, so there is a positive correlation between the two;

2. The market interest rate has a high contribution to the blue chip yield, which is negatively correlated;

3. The higher the market valuation expectation, the more bullish the investor is, the more the investment in the stock will increase, and the stock yield will increase even more;

4. The shareholding structure is mainly reflected in the concentration of equity, and the equity concentration index is negatively correlated with the stock return rate. The more concentrated the equity, the stronger the ability of the controller to control the listed company, the smaller the appreciation space of the stock;

5. The proportion of state stocks is significantly negatively correlated with the stock return rate. The effect of legal person shares, social public stocks and foreign stocks is not significant;

6. The effect of company size on the interpretation of blue chip yields is not obvious. The data shows that there is no correlation between the two.

References

- [1]. George Tauchen, Harold Zhang. Volatility, Volume and Leverage: A Dynamic Analysis [J]. Journal of Econometrics, 1996(74):179-202.
- [2]. Jensen. The Modern Industrial Revolution [J]. Journal of Finance, 1993, 48(4): 836-872.
- [3]. Zhu Wuxiang, Wang Lianheng. The stock market and corporate financial characteristics of blue chip companies [d]. Beijing: School of Economics and Management, Tsinghua University, 2001: 15-20.
- [4]. Tan Yawen. Research on the Impact of Corporate Governance Structure on Blue Chip Yields [j]. Investment Research, 2012, 31(7): 99-106.
- [5]. Qu Hongyan. Optimistic about the second quarter a-share market, blue-chip stock market is expected to continue [j]. Shanghai Securities Journal, 2017, 01-06.
- [6]. Xie Zuping. The registration system benefits a share, blue chip stocks benefit the most [j]. Securities Journal, 2013, 01-04.

- [7]. Chen Zhuangmin. Research on blue chip stock investment strategy based on optimal control algorithm [d]. Shaanxi: Shaanxi University of Science and Technology, 2014: 10-41.
- [8]. Jin Wei. Research on the influencing factors of China's blue chip cash dividend policy [d]. Shanghai: Fudan University, 2014: 20-44.