An A-Share Board Chasing Strategy Based on the JoinQuant Platform

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Abstract. The price limit system sets a limit on the price fluctuation of stock prices to ensure the stable operation of the securities market. Current research mainly focuses on the impact of various price limit policies on the stock market, but research on short-term investment strategies and methods for price limit stocks is still insufficient. Since the proportion of people who can get great investment returns in the Chinese stock market is very low, this paper aims to explore the stocks with good liquidity on the stopping stocks to construct investment strategies. In this paper, five important stock factors are identified through the multi-factor stock selection method, and then through the Join Quant platform with a back testing method, we finally get a good excess return and determine the value range of these five factors. Based on the above research, people can provide a good stop trading strategy for individual investors. This strategy can be called as a board chasing strategy, which can help investors to get high investment returns in a short period of time.

Keywords: Multi-factor stock picking model, back testing method.

1. Introduction

Under the background of the continuous optimization of the securities market mechanism, investors gradually attach importance to the investment value of the stock stops and believe that in some cases, buying the stock stops can obtain excess returns. Explore the short-term investment strategy after the stock stops, for a certain day closing day all stocks have stopped as the subject, to explore the future of short-term investment techniques, that is, what methods to buy stocks to stop getting excess returns.

Multi-factor stock picking model has been widely used in market investment, because of its superior performance in terms of timeliness and accuracy, it has become an important tool to analyze the current market conditions. The stock market is in a constant state of change, and the continuous exploration of which indicators are more effective in stock selection can provide a certain reference and reference for the development of market investment activities. Ensuring the accuracy of the research data and the scientific nature of the research methodology can effectively guarantee the objectivity and accuracy of the research conclusions, which is valuable research content for the whole stock investment. Multi-factor stock picking model involves many factors related to stock return, and then one needs to select the key factors from the many factors. This paper combines the multi-factor stock picking strategy model, and finally obtains five effective factors with significant influence, including market capitalization, the percentage of stopping block orders, willingness indicator, opening range, and turnover rate. Afterward, through the JoinQuant platform, the back testing method is used to determine that these factors can make the investment obtain a significant excess return within a specific value range.

This study takes stopping stocks as the research object and analyzes its investment strategy in depth, which not only can bring certain supplements to the theoretical research, but also can provide necessary theoretical guidance for investors. This paper elaborates on the theory of securities investment, combines the current up and down stop system, and focuses on the reasons that affect the stock stops and the investment strategy of the stock after the stop. The innovation of this study is to use the existing data in the secondary market to trace the trading process and compare the calculated return with the benchmark return of the stock index, to measure the effectiveness of the investment strategy. By optimizing the short-term investment strategy model and conducting a series of back-

testing analyses, the result is that the model can be used to provide investors with reliable recommendations for short-term investment activities.

2. Related work

The limit up/down system is widely used in the stock market with the aim of controlling market volatility, mitigating extreme short-term changes in stock prices, and thus protecting the interests of investors. The effect of this system has become the focus of research by scholars around the world. Empirical studies have found that the limit system affects the speed of stock price fluctuations, but not the magnitude of fluctuations. Lyman pointed out that the imbalance between supply and demand in the securities market is the main reason for the phenomenon of upward and downward stops [1]. Eugene Farmer argues that the stop-and-go system leads to a delayed reaction of stock prices, limiting the instantaneous reflection of market information and thus increasing the potential volatility [2]. Lo analyzes and summarizes the efficient market hypothesis in his study and puts forward the idea of the continuous evolution of the market in his paper, which implies that the financial market has been changing constantly, so it is not possible to maintain the effectiveness of the market [3]. Campcell&Thompson mainly researched the financial theory, and in the process of constructing the model, some parameters are attached to it for constraints [4]. After systematic analysis, the model can predict the return of stocks, Barber and Odean mainly studied the individual researcher, and the results show that the individual researcher refers to those who buy the stocks under the spotlight [5]. Typically, three indicators are used to measure investor interest in a stock: abnormal stock returns, abnormal stock trading volume, and the number of media and news. Through experimental research, it is concluded that individual investors in the implementation of the purchase behavior, its attention has the characteristics of asymmetry, in making the decision to buy faced with all the stocks on the market, can only notice a small portion of the market stocks, in the sale of liquidation of the position in the general will only pay attention to their own position in the stock [6]. Seasholes and Wu, to verify the market phenomenon of "stopping the death squad", analyzed the events of the hot stock market in China, that is, when the stock stops, it will attract more investors' attention, which will make the active trading investors buy the stocks that stop on the same day. After many statistical analyses, investors buy on T Day and sell on T+1, the average daily return obtained during the statistical cycle is about 1.2%, the study shows that the stopping stocks have certain investment opportunities [7]. Liu analyzed the impact factors of stock price volatility under the momentum trend, combined with the market capitalization factor and the low volatility factor to explore the analysis and study the stock investment strategy under the momentum trend [8].

In summary, existing studies have revealed the role of the limit up/down system in mitigating extreme market volatility and its potential impact on market effectiveness. At the same time, the changes in individual investor behavior under the influence of the limit up/down system are also worthy of attention. These studies provide theoretical support for further analyzing the applicability of the limit up/down system in different markets.

3. Data

In this paper, we select the daily uptick stock data of the A-share market from October 10, 2022, to October 10, 2024 for analysis by combining the multi-factor stock selection strategy model. Through preliminary screening, we identified 17 candidate factors. Then, from these 17 selected factors, we screened them by factor return, information ratio, maximum retracement rate, and Sharpe ratio, and finally obtained 5 effective factors with significant influence, including market capitalization, stopping block amount ratio, willingness indicator, opening gain/loss ratio, and turnover ratio [9].

According to the above factor analysis build a stop stock selection model to analyze, and according to the summary results of the corresponding optimization to make the model run more robust. The

reason for the establishment of the model is the existence of factor variables, through the changes in the factor can reflect the formation of investment decisions, now the factor set into this model can be used in two ways. The first is the back testing method, in the implementation of the process, first of all, to get the historical data of stock returns, through the Python code for different factors in the range of the value of multiple measurements, the use of the code in the conditional sentence so that the importance of each factor is not divided into high and low, and through the history of back testing to get a high excess return, which will help investors to choose the right stock [10]. The second is the scoring method, which is based on the size of the factor and scores the relevant stocks. The total score is calculated through a weighted method and screened accordingly. Although the scoring method has strong stability, it may not accurately reflect the actual situation when dealing with high-risk and high-premium uptick strategies [11]. Therefore, this paper adopts the first method, through my understanding of stock market indicators and multiple back testing of different types and values of factors brought about by the differences in the results of back testing, to complete the review of this topic.

4. Strategy Modeling Trading Rules

(1) Modeling assumptions

To facilitate the empirical research, this paper simplifies the experimental procedure while making the following hypotheses. On each opening trading day, the underlying stock can be successfully purchased by placing a pending order at a stop price; On each close-out selling date, be able to successfully sell the underlying shares held; Within the trading range, set the commission for buying stocks at 0.03% and for selling stocks at 0.03% plus 0.1% Stamp Duty; RMB 100,000 is an essential element of stock buying, ensuring that this element remains constant.

(2) Rules for buying and selling strategies

This paper analyzes the investment strategy of stocks after stopping, according to the stock model constructed in Chapter 4, the T-day stopping stocks are based on the model score to select the highest scoring three as the T+1 day stock investment target for portfolio investment. The

(3) Time rules for buying and selling

Buy from the first day of the strategy model back testing cycle. For T-day stocks, the three underlying stocks selected through the above strategy are bought at the opening price at the opening of T+1, and sold immediately at the opening price at the opening of the next day. The

(4) Frequency rules

This article analyzes the short-term investment returns of the stock, the frequency of buying and selling for the T Day to buy, T + 1 day to sell. The

(5) Rules for buying and selling positions

The initial capital is set at one hundred thousand dollars. When the stock reaches the buying criteria, all available funds are used to buy the stock. The exchange specifies that the minimum unit for each transaction is 1, or 100 shares. When selling the stock, you also liquidate your position in all three stocks. The following are some examples of how to do this.

(6) Analysis of Strategic Positions

By using the Python language to traverse the range of stopping stocks in the JW platform, and according to the investment strategy model, the stock is selected to be the most popular stock in the market

The stocks are screened by type factors and then imported into a list of poly-broad strategies for back testing.

5. An empirical study on the investment strategy of upwardly mobile stocks

From the above chapters, it can be learned that the author back tested the daily data of stocks with stops between October 10, 2022 and October 1, 2024 in Shanghai and Shenzhen based on the

conditional sentence type of the programming code in constructing the framework of the multi-factor stock selection model for stocks after stops and then conducted an empirical study from October 10, 2022 to October 10, 2024 based on the constructed model.

The stock selection strategy model constructed above was back tested over the period from October 10, 2022, to October 10, 2024, and the model achieved the following returns:

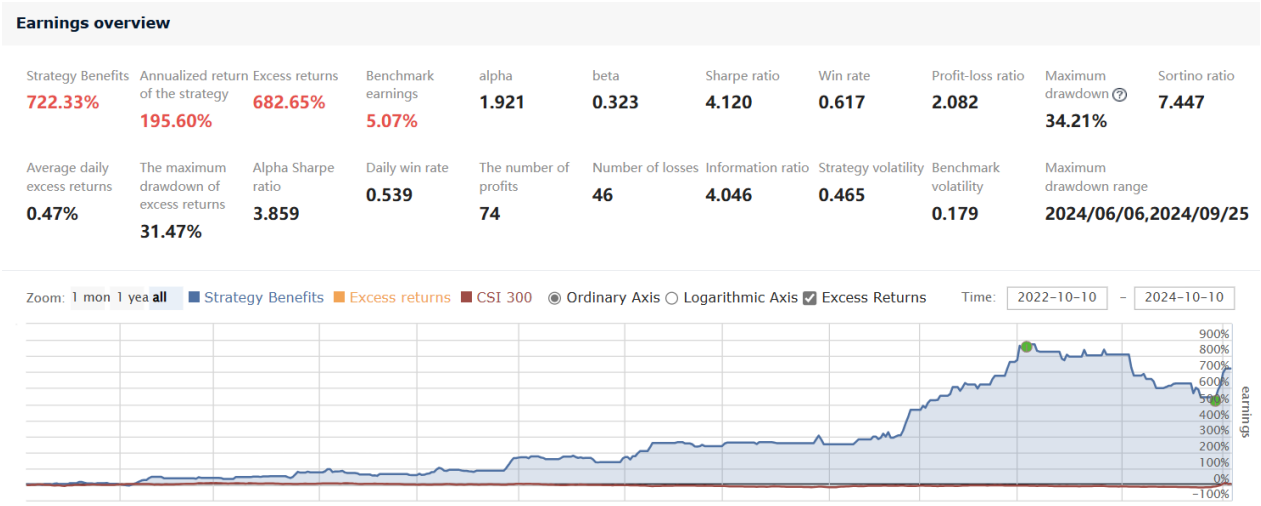

Figure 1. Plot of back testing results of the board chasing strategy

Based on the evaluation indicators, the key data in Fig.1 above are organized as follows.

Table 1. Evaluation table of the back testing results of the board chasing strategy

Strategy Benefits	722.33%
Compound annualized return	195.60%
Excess return	682.65%
Benchmark earnings	5.07%
Sharpe ratio	4.120
information ratios	4.046
Maximum drawdown	34.21%
Win rate	0.617

The strategy benefits were 722.33%, the excess return was 682.65%, the benchmark earnings were 5.07%, the Sharpe ratio was 4.120, the information ratio was 4.046, the maximum drawdown was 34.21%, the win rate was 0.617 (Table 1).

6. Conclusion

In this paper, we obtained five effective factors with significant influence through the multi-factor stock selection model, and through multiple assignments, we obtained the backtest results that the return of the strategy is significantly higher than the benchmark returns in the 2-year period, which demonstrates the superiority of the board-chasing strategy and provides theoretical guidance for individual investors to chase the board. Moreover, the theory is strongly supported by behavioral finance, efficient market theory and the momentum effect, which enhances the credibility of the board-chasing strategy.

Eventually, this paper obtains the optimal back testing results under the factor value range is the stock after stopping the next day open 3% to 6.5%, the stock market capitalization of 6 billion to 52 billion, on behalf of the stock by the market attention of the left pressure ratio is greater than 0.9. The value range of these indicators is exactly the core research results of this paper. After analyzing the data and combining the actual situation of Chinese A-shares, I think the result is very reasonable. Reaction to the chasing board strategy has a very good profit and loss ratio, liquidity and premium rate and other advantages.

However, this backtest is currently valid for small and medium-sized investors, but due to the capacity of funds, it remains to be studied whether large funds can intervene in the range of this indicator. Because the results of this paper get backtest in the retracement value is large, but the return is objective. Therefore, to do asset allocation, for large funds, you can choose a small portion of the funds for such an allocation, most of the funds for a safer allocation, so that the entire portfolio retraction is reduced, the overall risk is controlled, to obtain a higher Alpha return.

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