

# A Study of the Association Between Structural Trends Stocks Influenced by Investor Preferences and Broad Market Index Movements

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**Abstract:** By using the Chinese stock market data from 2018 to 2024, the weak association between structural trends stocks and market index under investors' preference effect in trading cause the market is lack of liquidity and more likely to be dominated by structural trends, as in this market, the willingness to engage in passive trading exceeds that for active trading and investors' preference easy to reverse toward market volatility. The lack of incremental capital in the market often leads to sector-specific rallies rather than broad-based increases, which is one of the key reasons why the Chinese stock market has struggled to achieve overall growth over the long-term period.

**Keywords:** Preference; Structural trends; Liquidity; Passive trading; Incremental capital

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## 1. Introduction

In modern financial markets, investor preferences have a profound impact on asset price formation and market trends. The participants of market, influenced by their risk appetites and market expectations, make corresponding investment decisions that subsequently affect the pricing mechanisms and volatility of assets. Their trading behaviors create structural patterns in individual stocks, which manifest through candlestick charts. Certain stocks exhibit a unique structure before breaking upward, which can often show symmetry or extremely irregular movements. It can be considered as a signal before the stock price breaks upward and is often considered as a structure that can generate upward momentum in technical analysis. Stocks that are about to form such a trend structure, or a K-line structure in a series of different time periods that meet the characteristics of such a structure, are considered to have potential upward momentum. From 2018 to 2024, in Chinese stock market, a number of stocks that have exhibited extremely unique and similar price action patterns over a period of time, as the insufficient liquidity cause the market to become structural. Stocks like 000622, 002708, 600604, 002565, 300748,

300313,601919, have experienced significant short-term surges, and share a common pattern: the stock prices of these companies either experienced a prolonged period of stability or fluctuated within a long-term range before rising significantly. The formation of this pattern typically spans several years, and in some cases, can extend beyond a decade.

As a well-known theory, Chan's Theory (a Chinese stock market analysis methodology) has provided the definition of the structural trend of stocks <sup>[1]</sup>. This theory emphasizes that both bullish and bearish trends inevitably develop such central pivot structures for certain stocks, which can be recognized as directional indicators and crucial momentum generators for price movements. Moreover, the Elliott wave theory further states that the movement of stock prices is believed to follow a specific wave pattern, which reflects changes in the psychology of investors <sup>[2]</sup>. The investment decisions made by investors based on their own preferences may become the driving force for stock prices to increase, especially in markets with a large number of retail investors. In the past decades, the Random Walk theory states that the current stock prices already incorporate all available market information, and the fluctuations in security prices are completely random and unpredictable, and the market price trend itself also follows a random pattern <sup>[3]</sup>. In 2018, Bordalo *et al.* discuss how diagnosis expectation theory contributes to individuals' decision-making related to investment <sup>[4]</sup>.

However, in 2022, Bordalo *et al.* point out that more precise predictions can be made by evaluating individuals' diagnosis expectations <sup>[5]</sup>. Incorporating diagnosis expectations into rational theories can lead to more efficient decision-making and better economic outcomes, which contributes to mitigating the volatility problem in the economy. Shleifer *et al.* discusses potential impacts on financial markets, as overreaction can be an important source of bubble <sup>[6]</sup>. The investors may highly rely on these kinds of "diagnosis tools" and over-confidently invest an excessive proportion of their fund of their wealth in asset markets and give rise to bubbles. However, one missing block to journals of research is investor's preference effect in their trading decision affect the feedback and outcome of market. Despite the preferences together with expectations can instruct agents in decision-making, the impact of individuals' behaviour is more likely to be based on their preferences. This study aims to explore the functionality of structural trend of stocks under the influence of individuals' preference and its association with China market index (SSE Composite Index).

## 2. Method

Stock data are collected from Eastmoney trading, Shanghai Stock Exchange, and Shenzhen Stock Exchange; the relevant stocks were selected from five index representing large-cap stocks, mid-cap, and small-cap stocks respectively <sup>[7-9]</sup>. To gain a large and representative sample, the trading period of collecting data is from 2018 to 2024. Among the selected trading periods, January, March, April, July, and October of each trading period are excluded.

### 2.1. Inclusion criteria

The inclusion criteria include:

- (1) The stock price moves sideways or fluctuate within a range over a period of time (at least over two months), forming multiple central pivot structures.
- (2) Within the selected time period, the stock has increased by 20% or more
- (3) There are no undisclosed significant matters such as financial fraud.

## 2.2. Exclusion criteria

Sudden news may lead to investors' expectations dominating their trading behaviour. Therefore, stocks whose prices fluctuate sharply due to the influence of sudden news factors within the selected trading period are excluded. Moreover, exclude stocks that have been intentionally manipulated due to unconfirmed news.

The excluded months are the annual crucial policy disclosure and the intensive period for financial performance disclosure. Therefore, to eliminate the expectation effect, the selected period for data analysis has been excluded from these months. Now these selected stocks' performance needs to be tested against the market index (SSE Composite Index), to test the association between them.

## 3. Results

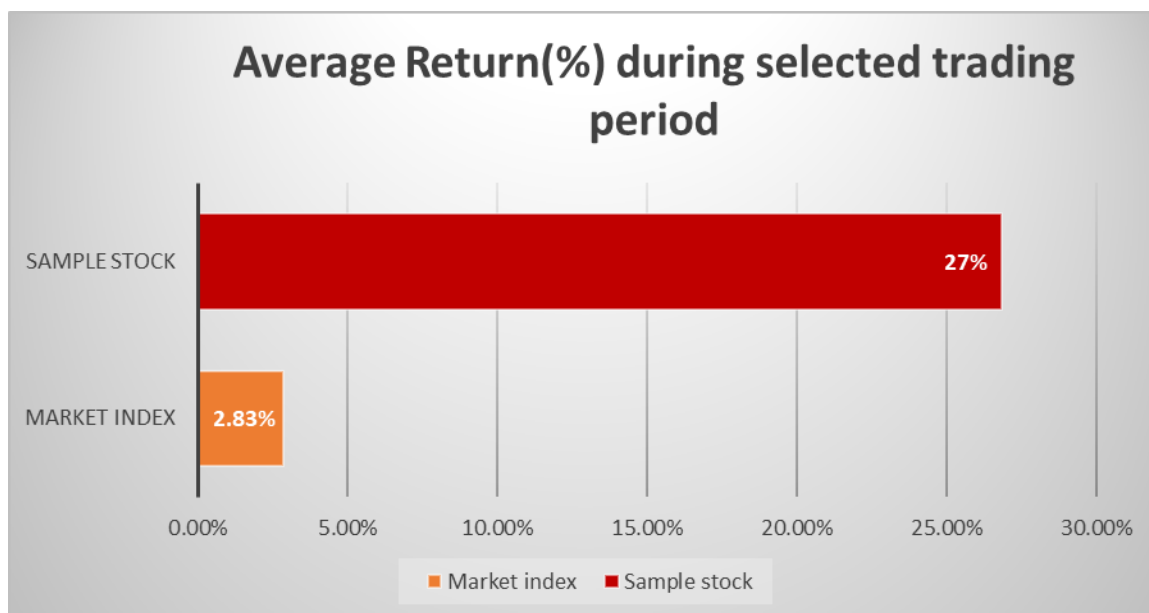
**Table 1** shows the summary of the sample selected stocks for this study, while **Table 2** shows the incremental trading volume of the Chinese market from the year 2018 to 2024. **Figure 1** shows the average return of the sample stock and the Market index if investors invested during the selected trading period.

**Table 1.** Summary of sample selected stocks

Index	Number of stocks	Period
CSI 300 Index	120	49
SSE 50 Index	10	49
CSI 500 Index	225	49
CSi 1000 Index	635	49
CSI 2000 Index	895	49
Overall	1886	49

**Table 2.** Incremental Trading Volume of Chinese market from 2018 to 2024

Time period	Increment Trading Volume (Billion)
2018	-24887
2019	37120
2020	79950
2021	50320
2022	-48120
2023	-11780
2024	42600
Average	17886



**Figure 1.** Average Return (%) during selected trading period

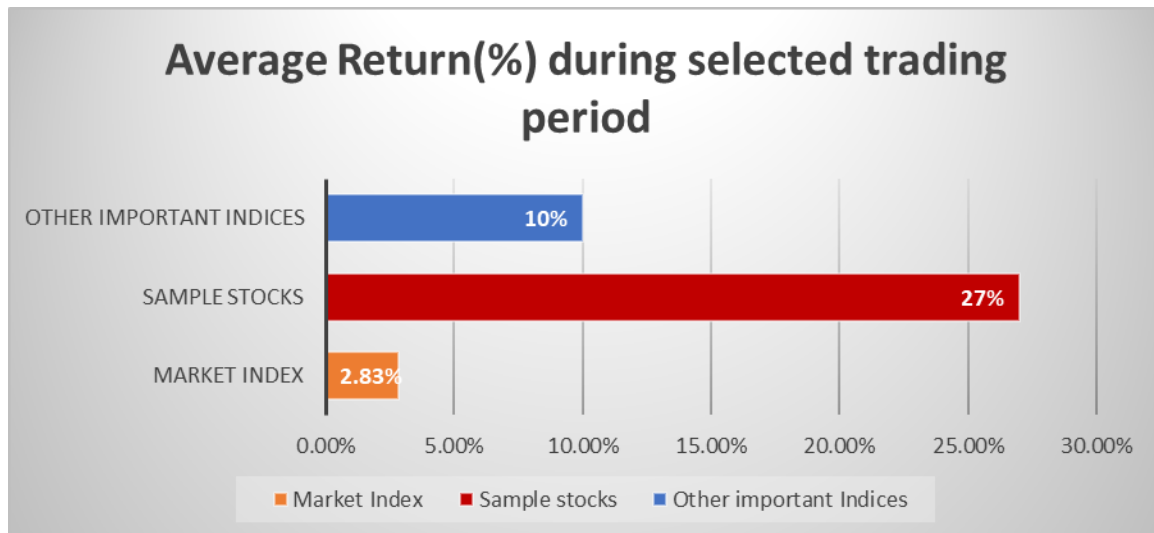
Based on the data presented in **Table 1**, **Table 2**, and **Figure 1**, a correlation test was conducted between the sample stocks and the SSE Composite Index, using the equation below.

The results indicate that the market index trend has a limited influence on the selected stocks, as evidenced by a *p*-value below 0.5. The test results show that the correlation is not significant. According to the data from the Shanghai Stock Exchange, by the end of December 2024, there are 5383 stocks listed in the Chinese stock market, while 256 stocks have very low trading volume (lack of liquidity). The sample stocks have occupied around 35% of the total stocks listed on the Chinese stock market. Under the Structural trends in stocks guided by preference, the performance of stocks also differs from the market index and other important index investors prefer to invest.

Based on **Figure 1**, the sample stock achieved an average return of 27%, while the market index only increased 2.83% within the selected trading period. Around 34% of publicly traded stocks have generated returns nine times greater than the market index's growth for investors. To further illustrate the weak association in the Chinese stock market between indices, investors prefer to invest within the selected period.

Within the selected period, by adding the other important indices into comparison, as the **Figure 2** shows that the performance of sample stocks is also better than the Market index and other important indices investors prefer to invest in, with CSI 300, SSE 50, CSI 500, CSI 1000, and CSI 2000 respectively.

As the market reactions during the policy-intensive period and the period of performance disclosure were excluded, the rate of return is more dependent on fundamentals and the capital situation. Under this situation, investors are more likely to make trading decisions based on their preferences. **Figure 2** also indicates that under the preference effect, the market is more likely to be dominated by structural trends, as within a certain time period, stocks in some sectors continue to rise consistently, while the majority either experience minimal growth or even decline.



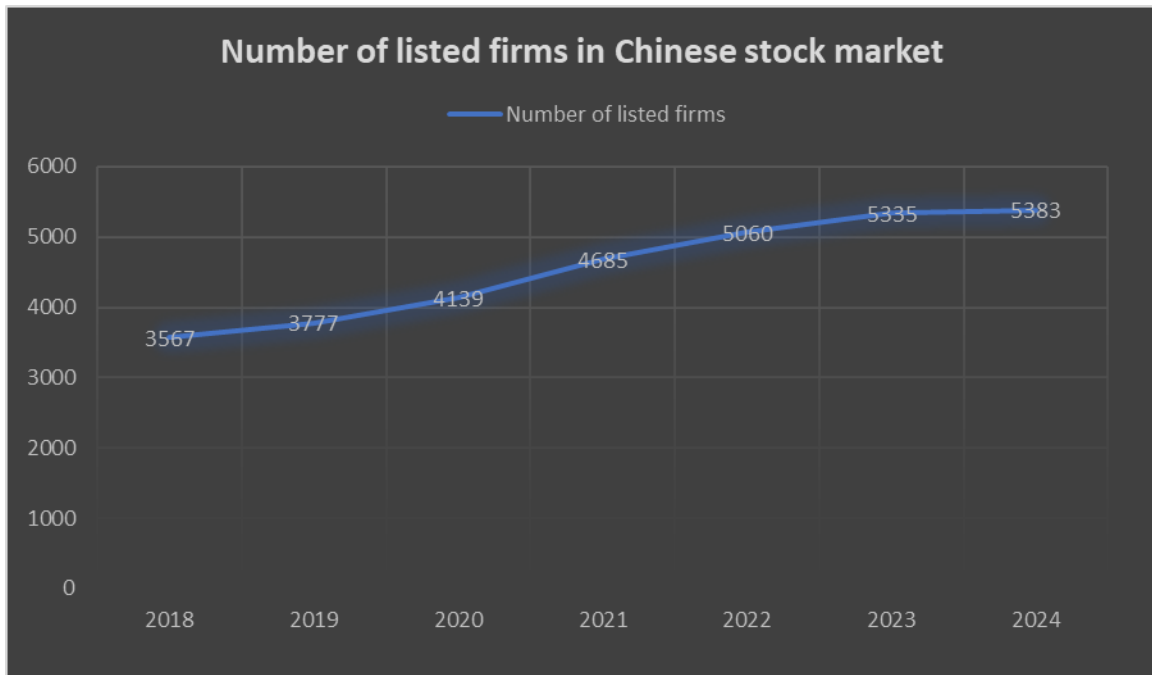
**Figure 2.** Average Return (%) during selected trading period

#### 4. Preference effect between the structural trend of stocks and the Market index

By the end of December 2024, according to the data from CSDC, the number of investors in the Chinese stock market has exceeded 220 million, and individual investors account for 99.7%, while there are only 50 million individual investors in the US stock market <sup>[10]</sup>. As the retail investor occupies a high proportion in the Chinese stock market, preferences play an important role in their decision-making toward trading.

##### 4.1. Trading mechanism

Under the T+1 trading mechanism, retail investors cannot end their trading within a single trading period, which makes their trading riskier. Most of them have risk-aversion before they try to invest in stocks, but by the time they hold the stocks on hand, they become loss-averse. Their preference changes quickly as the stock prices go up and down. However, most stocks in the Chinese market suffer from low liquidity. As shown in **Figure 3**, the increasing number of listed stocks has further strained overall market liquidity. This issue is exacerbated by the limited implementation of the market maker mechanism, which currently applies to only about 7% of all listed stocks, primarily those on the Sci-Tech Innovation Board and the Beijing Stock Exchange. Bian *et al.* point out that the T+1 trading rules cause the stocks to lack liquidity <sup>[11]</sup>. Investors' preference for liquidity has intensified speculative behaviour in the market. Therefore, the trend of stock is usually different from the market index. Besides, the Securities Lending and Borrowing Mechanism in China stock market enables institutional investors to hold an advantage position in the market, while retail investors may face greater risk in short-term stock investment, as it may enforce the short-selling power in the market, particularly when the market is temporary in a downward trend, and investors were forced to sell stocks out of panic, thereby exacerbating stock market volatility. Based on the data from CSF, on 12 June 2024, a total of 160 million shares were lent out in the margin lending and short selling business on that day <sup>[12]</sup>. At the same time, over 3400 stocks were dropped, which occupied 64% of the total stocks listed in the Chinese stock market.



**Figure 3.** Number of listed firms in the Chinese stock market

#### 4.2. Insufficient market liquidity problem

Preference can be an important source of bubbles when individuals overreact to the market trend. As most of investors in China stock market is individual investors, they are important in providing the liquidity in the market, Based on **Figure 4**, the proportion of retail trading (RTP) in China's stock market rebounded significantly to 50% by the end of 2024, and they usually account for around 60% of the total market trading volume.



**Figure 4.** Total market cap and Total trading volume (billion)

However, under the preference effect, retail investors are easy to lose money in short-term trading, while most of retail investors tend to hold stocks less than 5 days, as they prefer to invest in the stock, which prices rise with higher trading volume, these stocks are recognized to have sufficient liquidity, 15% of them prefer to hold stocks for above 6 months. Institutional investors tend to hold the stock for a longer period, as they have the advantage in funds. They can afford to maintain the liquidity for stocks as market maker, like placing orders with a close price or a certain price range. Therefore, stocks stay stable and even show an upward trend. Hu *et al.* states that when market liquidity is poor, retail investors may tend to engage in short-term trading to reduce transaction costs and risks, while when the market liquidity is in a good condition level, retail investors might pay more attention to long-term investment opportunities <sup>[13]</sup>. Under the insufficient liquidity market, the willingness to engage in passive trading exceeds that for active trading, as most of retail investors prefer short-term speculative activities, and there is less incremental funding flowing into the market after 2020. At the same time, the total market value was in a downward trend after 2021. As a result, the market is difficult to achieve an overall rise; instead, it is more about the rotational rise among stocks in different industries. Moreover, this also causes long-term stagnation of the Chinese stock market. This has caused China's stock market growth to nearly stagnate over the long term.

### 4.3. Preference reversal

Chinese market is a highly speculative emerging market, as the insufficient liquidity causes investors to rarely have the willingness to engage in active trade and hold stocks for the long term in the market. Amihud *et al.* found that insufficient liquidity may lead to the increase in speculative behaviour in emerging markets <sup>[14]</sup>. As the insufficient market liquidity makes it difficult for investors to obtain premiums in their investments, forces them to change their risk appetite. In this case, most of the investors only hold stocks for short-term trading, as they recognize that short-term trading earns a higher return from the high market volatility, and their preference is easy to be reversed. Kim *et al.* found that in the decision-making process, people tend to choose low-risk and low-reward options, whereas in pricing scenarios, they are willing to pay higher premiums for high-risk, high-reward alternatives <sup>[15]</sup>. When investors face the high market volatility, their preference may reverse, as they tend to buy if the market trend is rising and sell when the market is dropping. Therefore, they may misprice their investment and invest moves contrary to their preferences. This often happens in emerging markets, as the investors change their risk preference and make irrational investment moves frequently when they face the intense market volatility and causing the market stability is extremely fragile over a short-term period. At the same time intensified the structural divergence in the stock market.

## 5. Conclusion

Overall, the Chinese market is a highly speculative emerging market, and most of investors are willing to trade passively in response to market fluctuations, as the market faces the insufficient liquidity. Under investors' preference effect, Structural market trends have gradually become the main market trend, as the performance of stocks has a weak correlation with the market index, which leads to structural or rotational movements in sector-specific stocks, making it difficult for a broad-based rally to occur across the entire market. Besides, under the condition of insufficient market liquidity, investors are more willing to engage in short-term speculation rather than hold stocks for the long term; their preference may reverse toward the market volatility and even affect the stability of the market in short-term. Despite there is a high level of participation among market investors, the lack

of incremental funds results in the Chinese stock market struggles to achieve long-term stable growth.

## Disclosure statement

The author declares no conflict of interest.

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