

Momentum and Reversal Heterogeneity between A-Shares and Hong Kong Stocks

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Abstract:

Momentum and reversal effects are two prominent anomalies pervasive in financial markets, manifesting distinctly across different markets. Through comparative analysis, this paper elucidates the differences between China's mainland A-share market and the Hong Kong stock market, examining their heterogeneous characteristics in momentum and reversal effects along with the underlying formation mechanisms to inform investment strategy development. Long-term observations reveal nearly antithetical price patterns between the A-share and Hong Kong markets - the A-share market is dominated by significant short-term reversal effects, where previously underperforming portfolios substantially outperform past winners, whereas the Hong Kong market exhibits robust medium-term momentum effects, with the outperformance of previously profitable portfolios persisting. Analysis of driving factors identifies market structure, investor behavior, trading mechanisms, and market volatility characteristics as fundamental determinants of cross-market heterogeneity. This pronounced contrast establishes these markets as an ideal laboratory for investigating market heterogeneity. Furthermore, this paper highlights the absence of a unified framework in current behavioral finance theories to adequately explain momentum and reversal effects in both markets, thereby offering fresh perspectives for understanding the interactive relationships and evolutionary trajectories of these anomalies across markets.

Keywords: momentum effect; reversal effect; market heterogeneity; investor structure; A-share market; Hong Kong stock market

1. Introduction

In global financial markets, the momentum and re-

versal effects in stock markets have consistently been a focal point of both academic research and investment practice. Understanding and capturing these ef-

fects are of great significance for investors seeking to construct effective investment strategies and achieve optimal asset allocation. Although numerous independent studies have been conducted on momentum and reversal effects in either A-shares or Hong Kong stocks, there remains a relative scarcity of systematic comparative research on the heterogeneity between these two markets.

Against this backdrop, this paper summarizes and synthesizes the differences between the two markets and conducts a systematic comparison of momentum and reversal effects in the A-share and Hong Kong stock markets. By clarifying the disparities in momentum and reversal effects between the two markets, this study aims to assist investors in understanding the price patterns of different markets, thereby providing a basis for strategy formulation and asset allocation optimization in cross-market investments.

2. Theoretical Foundations of Momentum and Reversal Effects

2.1 The Divergence Between Efficient Market Hypothesis and Momentum/Reversal Phenomena

The Efficient Market Hypothesis posits that in an efficient market, stock prices already reflect all available information, making it impossible for investors to achieve excess returns by analyzing historical prices or other public information. However, the existence of momentum and reversal effects challenges this hypothesis. The momentum effect suggests that stock prices tend to continue their historical trends, while the reversal effect indicates that stock prices adjust in the opposite direction. This implies that investors can utilize past price information to predict future stock movements and obtain excess returns.

2.2 Behavioral Finance Explanations for Momentum and Reversal Effects

To explain momentum and reversal effects, behavioral finance theory emerged. This theory proposes various explanatory models from the perspective of investor psychology and behavioral biases. Three primary models are introduced here. The first is the Barberis-Shleifer-Vishny model (BSV model), which suggests that investors exhibit conservatism bias and representativeness bias in decision-making, leading to underreaction or overreaction to new information, thereby generating momentum and reversal phenomena. The Daniel-Hirshleifer-Subrahmanyam model (DHS model) emphasizes investors' overconfidence and self-attribution bias, causing short-

term momentum and long-term reversal in stock prices. The Hong-Stein model (HS model) categorizes investors into information observers and momentum traders, where the gradual diffusion of private information among information observers leads to momentum and reversal effects in stock prices. These behavioral finance theories provide new perspectives for understanding momentum and reversal phenomena [1].

3. Classical Theories and Empirical Evidence on Momentum and Reversal Effects

3.1 Characteristics of Momentum and Reversal Effects in the A-Share Market

Understanding the momentum and reversal heterogeneity between A-shares and Hong Kong stocks requires first grasping the overall trend differences between the two markets. The A-share market exhibits certain momentum effects in the short term, but these effects are relatively weak and unstable. In the medium term, reversal effects are more pronounced. By dividing market cycles into bull, bear, and sideways markets, the impact of cycles on these effects is further validated. During bull markets, the duration of short-term momentum effects slightly extends, lasting up to three weeks at most, while medium-term reversal effects remain significant. In bear and sideways markets, the strength of short-term momentum effects noticeably weakens, and medium-term reversal effects become more prominent. This explains why short-term trading strategies that follow trends (buying rising stocks and selling falling ones) in the A-share market often lead to losses in the medium term, while medium-term strategies of buying undervalued stocks are more likely to generate returns [2].

In the A-share market, market capitalization significantly influences stocks' momentum and reversal effects. Typically, small-cap stocks exhibit more pronounced momentum and reversal characteristics. This is because small-cap stocks, with their smaller float, are more susceptible to speculative trading and investor sentiment, leading to greater price volatility. Consequently, they may show stronger momentum effects in the short term and are more prone to reversals in the medium term. In contrast, large-cap stocks, with their relatively stable fundamentals and higher levels of market attention and research, reflect information more efficiently in their prices, resulting in weaker momentum and reversal effects.

3.2 Characteristics of Momentum and Reversal

Effects in the Hong Kong Stock Market

The Hong Kong stock market overall demonstrates relatively clear reversal effects, especially from a long-term perspective. Taking Tencent Holdings as an example, during its rapid rise from 2017 to early 2018, its stock price surged from approximately HKD 180 at the beginning of 2017 to around HKD 475 by the end of January 2018, accumulating a gain of over 160% [3]. However, during certain specific periods, the Hong Kong market can also exhibit momentum effects. From early January to mid-February 2024, driven by the narrative of domestic AI themes leading to asset revaluation, coupled with synchronized inflows from southbound and overseas capital, market liquidity in Hong Kong stocks significantly improved. According to Liu Yingjie and Tan Dinghao, the Hang Seng Index accumulated a gain of 19.5% during this period. For instance, Xiaomi Corporation, leveraging its layout in the AIoT field and expectations for innovation in its smartphone business, saw its stock price rise from around HKD 8 at the start of the year to nearly HKD 12 by mid-February, a rise of approximately 50% in just over one and a half months, showcasing a typical momentum-driven increase [4].

The momentum and reversal effects vary significantly across different industry sectors in the Hong Kong stock market. During the early stages of economic recovery, from late 2020 to the first half of 2021, as the global economy gradually emerged from the shadow of the pandemic and began to recover, Hong Kong energy stocks, buoyed by improved demand expectations from the economic rebound, displayed strong momentum-driven gains. However, by the second half of 2022, as signals of a slowdown in global economic growth intensified and demand expectations for energy were significantly downgraded, the stock price of CNOOC fell from a high of HKD 10 at the beginning of the year to around HKD 7 by the end of the year, a decline of approximately 30%.

3.3 Comparison of Momentum and Reversal Effects Between A-Shares and Hong Kong Stocks

The stability of medium-term reversal effects in A-shares has been validated by long-term data; even under extreme market conditions such as the 2008 financial crisis, their core characteristics remained unchanged. In contrast, Hong Kong stocks demonstrate high environmental sensitivity: after the launch of the Shanghai-Hong Kong Stock Connect in 2014, the correlation coefficient between the two markets' indices decreased from 0.466 to 0.247, and the persistence of momentum and reversal effects subsequently weakened. However, when market sentiment

cooled in January 2023, momentum factors quickly regained effectiveness [5].

Furthermore, the influencing factors of momentum and reversal effects in A-shares and Hong Kong stocks exhibit distinct market-specific characteristics. In the A-share market, the investor structure is predominantly composed of retail investors, whose investment behaviors display prominent irrational characteristics, such as excessive trading and trend-chasing (buying rising stocks and selling falling ones), significantly impacting the market's momentum and reversal effects. Simultaneously, market mechanisms in A-shares, such as price limits and the T+1 trading rule, also affect the speed and extent to which stock prices reflect information, thereby influencing momentum and reversal effects. In contrast, the Hong Kong stock market is primarily dominated by overseas institutional investors, whose investment decisions are relatively more rational and focused on fundamental analysis. The market mechanisms in Hong Kong stocks are more flexible, with no price limits and T+0 trading, allowing stock prices to reflect market information more rapidly. However, this also increases market volatility and exerts different influences on momentum and reversal effects.

4. Theoretical Analysis of Underlying Causes of Heterogeneity

4.1 Differences in Market Structure

The A-share market comprises a large number of listed companies spanning various industries and sectors, with small and medium-sized enterprises constituting a relatively large proportion. The liquidity disparities arising from the multi-tiered market structure of A-shares further amplify the complexity of momentum and reversal effects. Differences in listing thresholds and investor appropriateness requirements among the Main Board, ChiNext Board, and STAR Market lead to significant divergence in liquidity across these segments: the Main Board maintains stable liquidity year-round due to its large investor base, whereas the ChiNext and STAR Boards, focused on innovative enterprises and requiring investors to meet higher asset thresholds, are prone to sharp liquidity contractions during periods of market volatility [6].

In contrast, the Hong Kong stock market is primarily composed of large blue-chip stocks, red-chip stocks, and China-concept shares. These companies are generally larger in scale and operate in industries with higher concentration. They typically demonstrate relatively stable performance and high market recognition, resulting in comparatively steadier stock price fluctuations and some-

what simpler manifestations of momentum and reversal effects. Although the Hong Kong market also distinguishes between a Main Board and a Growth Enterprise Market (GEM), its overall liquidity is higher, and it is more open to foreign capital. This structure contributes to more stable momentum and reversal effects. On one hand, the Hong Kong Main Board attracts global capital, ensuring abundant liquidity year-round (e.g., the average daily turnover for Hang Seng Index constituent stocks generally exceeds HKD 1 billion), allowing stock prices to reflect information more fully and reducing the likelihood of overreaction or underreaction. On the other hand, the high proportion of foreign investment (approximately 20%-30% of Hong Kong stock holdings are held by foreign investors) leads to more diversified funding sources and higher market pricing efficiency.

4.2 Differences in Investor Behavior

Retail investors account for approximately 80% of trading volume in the A-share market. These investors often lack professional investment knowledge and rational decision-making capabilities, making them susceptible to market sentiment and prone to behaviors such as trend-chasing (buying rising stocks and selling falling ones) and excessive trading [7]. Such irrational investment behaviors cause stock prices to overreact to market information, subsequently forming pronounced reversal effects in the medium term. For instance, when positive market news emerges, retail investors may become overly optimistic and rush to buy stocks, driving prices beyond reasonable levels; conversely, they may panic sell in response to negative news, causing excessive price declines. This overreaction leads to a mean-reverting reversal trend in stock prices over the medium term. Furthermore, herding behavior is prevalent among retail investors, who often follow market hotspots and the trading actions of others, thereby exacerbating market volatility and reinforcing the formation of momentum and reversal effects.

The Hong Kong stock market is predominantly composed of overseas institutional investors. These institutions typically possess extensive investment experience, professional research teams, and well-established investment decision-making frameworks, resulting in relatively more rational investment behavior. They place greater emphasis on fundamental analysis of listed companies and the pursuit of long-term investment value, reacting to market information with greater calmness and accuracy. These characteristics of institutional investors contribute to relatively steadier stock price fluctuations in the Hong Kong market, with less extreme manifestations of momentum and reversal effects. However, institutional investors are

also influenced by factors such as the macroeconomic landscape, industry trends, and international political situations in their decision-making. When significant changes occur in these factors, institutional investors may simultaneously adjust their portfolios, leading to substantial market fluctuations and the consequent emergence of momentum and reversal effects. For example, when expectations of a global economic recession strengthen, institutional investors may widely reduce holdings of risky assets, causing a broad decline in the Hong Kong stock market and reversals in some previously well-performing stocks.

4.3 Differences in Trading Mechanisms

The price limit mechanism and T+1 trading rule implemented in the A-share market significantly impact momentum and reversal effects. The price limit mechanism restricts the daily fluctuation range of stock prices. When prices hit the upper or lower limit, trading may be constrained, preventing market information from being promptly and fully reflected in stock prices. In the case of limit-up scenarios, where demand outstrips supply, trading restrictions prevent investors from buying promptly, potentially leading to continued price increases on subsequent trading days and forming short-term momentum effects. Conversely, during limit-down scenarios, excess supply prevents investors from selling promptly, potentially exacerbating downward trends and forming medium-term reversal effects. The T+1 rule, which prohibits selling stocks purchased on the same day, increases trading time costs and risks, also affecting the speed at which prices respond to information. When unexpected information emerges, investors cannot adjust their portfolios promptly, leading to delayed price reactions and prone conditions for overreaction or underreaction, thereby influencing momentum and reversal effects. For example, when a stock suddenly announces significant positive news during the trading day, T+1 restrictions prevent immediate buying, potentially causing a substantial gap-up opening the next day and forming short-term momentum; however, if market expectations for the positive news are excessively high, subsequent price rationality adjustments may lead to reversals [8].

The Hong Kong stock market, with no price limits and a T+0 trading system, allows stock prices to reflect market information more rapidly and fully. Without price limits, stock prices can fluctuate freely according to market supply-demand dynamics and information changes. When significant information emerges, prices can react swiftly, reducing the impact of information lag on momentum and reversal effects. The T+0 trading system, allowing same-day buying and selling, enhances capital utilization

efficiency and market liquidity. Investors can adjust strategies promptly based on market changes, making price responses to information more sensitive. However, this system also increases market speculation and volatility, potentially triggering excessive trading and trend-chasing behaviors among investors, which in some cases may amplify momentum and reversal effects. For instance, when market hotspots emerge, investors might frequently trade related stocks using T+0, causing sharp short-term price fluctuations and forming noticeable momentum effects; however, when market sentiment shifts, prices may reverse rapidly [9].

4.4 Market Volatility Perspective: GARCH Model Residuals and Momentum-Reversal Heterogeneity

Beyond direct trading behaviors and investor preferences, the intrinsic patterns of market volatility also influence momentum-reversal logic. Another key dimension for understanding momentum-reversal heterogeneity lies in the clustering and residual patterns of asset price volatility. The GARCH model, by capturing statistical characteristics of return residuals, can reveal the micro-level patterns behind market volatility, thereby providing supplementary explanations for momentum-reversal logic.

Table 1. Statistical Tests Based on Standardized Residuals of the GARCH Model

	A-share	Hong Kong Stock Market	US Stork Market
BP(5)	8.96(0.11)	2.31(0.80)	0.77(0.98)
BP(10)	13.44(0.20)	8.08(0.62)	5.38(0.86)
BP(20)	19.15(0.15)	17.71(0.61)	20.17(0.45)
BP ² (5)	0.74(0.98)	10.06(0.08)	1.00(0.96)
BP ² (10)	3.53(0.97)	13.39(0.20)	3.83(0.96)
BP ² (20)	9.28(0.98)	21.65(0.36)	24.75(0.21)

As shown in Table 1 [10], A-shares and Hong Kong stocks exhibit significant differences in the test results for residual return series (BP(m)) and squared series (BP²(m)): For the residual return series (BP(m)), the A-share BP(5) and BP(10) statistics (8.96, 13.44) are higher than those of Hong Kong stocks (2.31, 8.08), indicating stronger short-term correlation in A-share residual returns and more pronounced “memory” in price volatility. This suggests that the continuation or reversal of price momentum in A-shares may be more deeply influenced by the “inertial effect” of historical volatility – if prior information shocks create upward momentum, the short-term clustering of residuals reinforces the trend; conversely, when reversal signals appear, adjustments are easily amplified by volatility inertia.

For the squared residual series (BP²(m)), the Hong Kong stock BP²(5) and BP²(10) statistics (10.06, 13.39) are significantly higher than those of A-shares (0.74, 3.53), indicating stronger correlation in squared residuals in Hong Kong. As an internationalized market, Hong Kong is more directly exposed to global information shocks, where macroeconomic events can trigger sharp price fluctuations. The high correlation of squared residuals implies that “volatility shocks exhibit persistence.” When negative information triggers downward momentum, volatility clustering accelerates price deviations from fundamentals, potentially shortening momentum duration and inducing medium-term reversals. In contrast, A-shares’ weaker vol-

atility clustering results in relatively more stable “trend” characteristics in momentum effects.

Ultimately, these distinct residual patterns, arising from differences in market systems and investor structure, manifest in the momentum-reversal effects. Thus, the residual patterns revealed by the GARCH model provide a new “microstructure of volatility” perspective for understanding the heterogeneity of momentum-reversal effects between the two markets.

5. Conclusion

This study has primarily focused on the impact of three key factors—market structure, investor behavior, and trading mechanisms—on the heterogeneity of momentum and reversal effects. The A-share market exhibits weak and unstable short-term momentum effects, while demonstrating significant and stable medium-term reversal effects. These reversal effects are more pronounced during bear and sideways markets and are stronger in small-cap stocks. Price fluctuations show strong “memory,” deeply influenced by historical inertia, with core patterns remaining unchanged even through the 2008 financial crisis. In contrast, the Hong Kong stock market displays clear long-term reversal effects and phased, medium-term momentum effects. This indicates that Hong Kong, being more directly exposed to global shocks, experiences volatility impacts that shorten momentum cycles. It also demonstrates high environmen-

tal sensitivity: after the 2014 Shanghai-Hong Kong Stock Connect launch, the persistence of effects weakened, yet momentum factors regained effectiveness following the cooling of market sentiment in January 2023.

Although behavioral finance theories are widely used to explain momentum and reversal effects, a unified and systematic theoretical framework is still lacking. The practical significance of this research lies in providing differentiated strategic references for cross-market investors. Addressing the current research gap where single-market studies on momentum and reversal abound but cross-market comparisons are scarce, this paper has focused on A-shares and Hong Kong stocks. It aims to reveal the heterogeneous characteristics of momentum and reversal effects in these two markets, analyze their causes, provide cross-market strategic insights, and supplement the empirical evidence from Chinese markets for behavioral finance theory.

Furthermore, the proposed directions for cross-market linkage and theoretical framework innovation offer new avenues for future research on financial market anomalies. Focusing on the connectivity mechanisms, quantifying the impact of southbound capital flows transmitting retail investor behavior to the Hong Kong market, and investigating the interactive relationships of anomalies between the two markets will help advance the development of behavioral finance theory that is more closely aligned with the Chinese market context.

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