

## **Does Momentum Still Exist in the Australian Stock-Market?**

**Imroze Nandha**

*Australian Competition and Consumer Commission, Melbourne, Australia*

**Harminder Singh\***

*School of Accounting Economics and Finance, Deakin University, Australia*

**Randy Silvers**

*School of Accounting Economics and Finance, Deakin University, Australia*

---

*Key words:* momentum; efficiency; anomaly

*JEL classification:* G10; G14

---

### **1. Introduction**

Momentum refers to the strategy that buys past winners and sells past losers, which earns abnormal returns for a period of up to one year after the execution of the strategy. The empirical evidence of the momentum phenomenon challenges asset pricing theory and the efficient-market hypothesis. Several explanations of empirical evidence of momentum have been proffered: (i) data snooping, (ii) irrational agents, (iii) low-volume stocks, (iv) lagged macroeconomic variables and time-varying expected returns (Chordia and Shivakumar, 2002), and (v) market bias or under-reaction or slow reaction to firm-specific information (Figelman, 2007). On this last possibility, an alternative is that the market over-reacts to information. Although De Bondt and Thaler (1985) find evidence for this over a long period (3–5 years), Jegadeesh and Titman (1993) show that momentum can exist over a shorter period (1–2 years). It is also possible that the appearance of momentum is the result of omitted variable bias, e.g., Fama and French (1995) include size and book-to-market equity factors, Moskowitz and Grinblatt (1999) include industry performance, and Hong and Stein (1999) include market capitalization.

The efficient-market hypothesis implies that, after evidence of momentum is made public, momentum will disappear as fund managers adjust their trading strategies. We seek to determine if there is still evidence of this anomaly of momentum. This note investigates the profitability of a momentum investing strategy implemented using the weekly returns of stocks from ASX 200 of the Australian stock market. Using weekly returns to assess potential explanations of momentum affords

---

\*Correspondence to: School of Accounting Economics and Finance, Deakin University, 70 Elgar Road, Burwood-3125, Victoria, Australia. Email: [singh@deakin.edu.au](mailto:singh@deakin.edu.au).

researchers greater confidence in identifying the news that underlies the return (Gutiérrez and Kelley, 2008). Moreover, our study covers a relatively recent period, January 1997 to December 2006, and excludes the 2007–2009 global turmoil. Our main finding is that momentum exists in the top 200 Australian stocks and, in fact, prevails for more than a year.

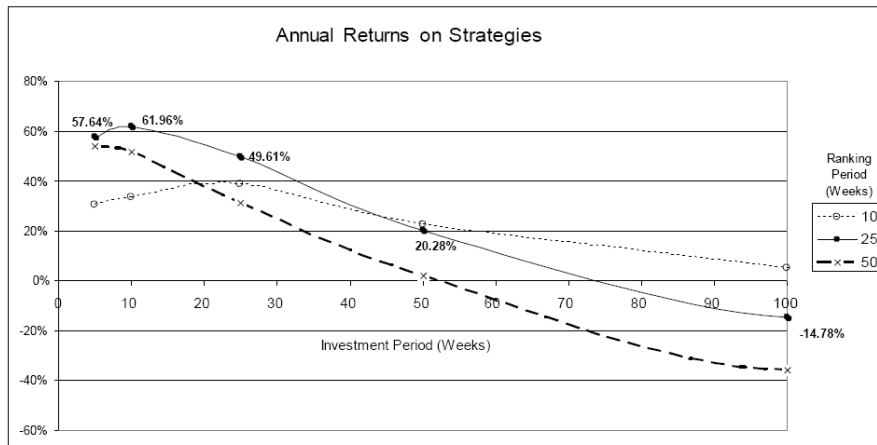
## **2. Data and Methodology**

The data, which are sourced from Bloomberg, consist of weekly observations on Australian stock prices over the period January 1997 to December 2006. The smaller size of the Australian stock market and the subsequent thin trading required us to limit stock selection to the top 200 stocks in the country. We employ a naive momentum-trading strategy as follows: first, we calculate the  $J$ -week returns (the ranking period); next, we rank these returns and select those stocks in the top and bottom deciles to formulate the winner and loser portfolio returns (WPR and LPR); last, an equally weighted portfolio of these stocks is held for  $K$  weeks (the investment period). Although we ignore transaction costs, we can view this strategy as a one-time transaction of 28 stocks, held for  $K$  weeks, and then sold. Importantly, for robustness against the influence of macroeconomic conditions, the sample period covers almost a decade. The strategy was implemented using Mathematica code. Subsequent to executing the initial momentum trades, we had the flexibility of repeating trades with altered formation and investment periods. A diverse selection of formation and holding periods, ranging from 10 to 150 weeks, was also undertaken.

## **3. Results**

From Figure 1 it can be ascertained that those engaging in a momentum strategy should anticipate its effects to die out after 50 weeks or approximately one year after setting up. Investing for a 10-week period using a 25-week ranking gives the highest annualized return, showing that momentum is a short-term or an intermediate occurrence in the stock market. As the holding period reaches 100 weeks, the difference between the returns on the winner and loser portfolio declines to reduce momentum effects. From a returns perspective our results are in the same direction as those of Lee and Swaminathan (2000), who reported that abnormal returns on pure price momentum strategies persist for only 12 months. The 25/25 week is one such strategy that has received considerable attention in the literature in the form of Jegadeesh and Titman's (1993) 6 month-6 month strategy. Similarly, Grinblatt and Moskowitz (2004) document that return consistency contributes to momentum in 6–12 month returns.

Figure 1. Graph of Annualized Momentum Profits



Momentum returns difference tests are used to establish whether WPR is significantly different from LPR. In each strategy examined, we rejected the null hypothesis that the portfolio returns are the same; thus, the momentum profit is significantly different from zero. We then conducted stationarity tests for each portfolio strategy considered. Contrasting the test results for the WPR and LPR at different *J/K* strategies, it appears that the difference in returns might be occurring in some instances where one portfolio's returns are stationary and the other portfolio's returns are non-stationary.

Seasonality effects are another feature of momentum studies, and there is reason to suspect that a July effect exists in Australian data as it corresponds with the beginning of the new financial year. We find no statistically significant evidence of a July effect—adjusting for this results in annual returns declining by 5% (the 25/10 strategy), 3.5% (the 10/25 strategy), and smaller declines for other strategies. The lack of a July effect contrasts with a result of Durand et al. (2006), who find strong seasonal regularity associated with July. Two factors may explain this difference: they formed their portfolios by taking monthly returns and the sample periods are different.

Among studies on Australian markets, our results are also consistent with Hurn and Pavlov (2003) and Drew et al. (2007). Our finding is at odds with Durand et al. (2006). Durand et al. (2006) use all the stocks available on ASX while we have confined to the top 200 stocks, which are the most liquid in the market. Considering all stocks admits the potential pitfall of thin trading since highly illiquid stocks are hard to short sell; i.e., nontrivial hurdles facilitate exploiting momentum in real time. For checking economic significance, an examination into trading costs and short selling limitations can provide further insight into implementing momentum strategies.

**References**

- Chordia, T. and L. Shivakumar, (2002), "Momentum, Business Cycle, and Time-Varying Expected Returns," *Journal of Finance*, 57(2), 985-1019.
- De Bondt, W. F. and R. Thaler, (1985), "Does the Stock Market Overreact?" *Journal of Finance*, 40(3), 793-805.
- Drew, M., M. Veeraraghavan, and M. Ye, (2007), "Do Momentum Strategies Work? Australian Evidence," *Managerial Finance*, 33(10), 772-787.
- Durand, R., M. Limkriangkrai, and G. W. Smith, (2006), "Momentum in Australia- A Note," *Australian Journal of Management*, 31(2), 355-364.
- Fama, E. F. and K. R. French, (1995), "Size and Book-to-Market Factors in Earnings and Returns," *Journal of Finance*, 50(1), 131-156.
- Figelman, L., (2007), "Interaction of Stock Return Momentum with Earnings Measures," *Financial Analysts Journal*, 63(3), 71-78.
- Gutierrez, R. and E. Kelley, (2008), "The Long-Lasting Momentum in Weekly Returns," *Journal of Finance*, 63(1), 415-447.
- Hong, H. and J. C. Stein, (1999), "A Unified Theory of Underreaction, Momentum Trading and Overreaction in Asset Markets," *Journal of Finance*, 54(6), 2143-2184.
- Hurn, S. and V. Pavlov, (2003), "Momentum in Australian Stock Returns," *Australian Journal of Management*, 28(2), 141-155.
- Jegadeesh, N. and S. Titman, (1993), "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency," *Journal of Finance*, 48(1), 65-91.
- Lee, C. and B. Swaminathan, (2000), "Price Momentum and Trading Volume," *Journal of Finance*, 55(5), 2017-2069.
- Moskowitz, T. and M. Grinblatt, (1999), "Do Industries Explain Momentum?" *Journal of Finance*, 54, 1249-1290.