Tweedy, Browne

THE INSIDER INVESTMENT FACTOR:

Using insider purchasing and stock buyback data in combination with valuation ratios and other fundamental financial information to, hopefully, beat the market

"The deepest sin against the human mind is to believe things without evidence."

T.H. Huxley

Abstract

In the following pages, using proprietary and non-proprietary studies, we illustrate potential benefits of investing alongside "C-suite" executives and directors who purchase their own companies' shares and alongside companies that buy back their own shares, particularly when the company's shares appear to be undervalued.

Our paper, "What Has Worked In Investing," provides an anthology of investment factor studies that empirically identified a return advantage for value-oriented investment characteristics—also often described as "investment factors." In the same spirit, we examine herein what we sometimes refer to as the "insider's edge," i.e., the unique insight that high-ranking corporate executives and informed directors can have regarding the prospect for improvement of their company's condition and, ultimately, its share price.

C-suite executives often have insights concerning new marketing programs, improving industry conditions, undervalued assets held by the company, and the value of the company's shares if it were to be acquired by a competitor or private equity firm. C-Suite executives have access to investment bankers who may be very familiar with acquisition valuations and standards in their company's industry. Importantly, C-Suite executives can ACT: they can initiate corporate actions that may lead to an increase in their company's stock price – such as initiating dividend increases, buybacks of their company's shares at depressed prices, debt pay downs, spinoffs and sales of assets whose value is not reflected in the company stock price, cost-cutting programs, business expansion programs, and even the sale of their company to a competitor or a private equity firm.

The C-suite insiders can create news! C-suite executives are also the source of most information that Wall Street investment analysts, institutional investors, hedge funds, individual investors, and corporate and private equity acquirers rely upon in making investment decisions. Ultimately, there is only one logical reason for corporate insiders to reach into their wallets and make free-will, open-market purchases of their own companies' shares—they believe the stock price will increase. They do not buy their stock with the intention of losing money! However, many insider purchases have resulted in future losses, not gains. There is no "sure thing" in investing. ■

> “Insiders who are expected to be more knowledgeable with the overall affairs of the firm, such as chairmen of the boards of directors or officer-directors, are more successful predictors of future abnormal stock price changes than officers or shareholders alone.
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> H. Nejat Seyhun
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> *Insiders' Profits, Costs of Trading, and Market Efficiency,* Journal of Financial Economics (1985)

Several historical studies, largely from academia, have indicated that corporate officers and directors, i.e., “insiders” who purchase their own companies' shares in the stock market tend to beat the market. Additional studies have also shown that similar results hold for companies whose insiders /managements decide to buy back their own company's shares at undervalued prices based on common value metrics, thus reducing their overall share count and increasing value per share. The results become even more robust when purchases by insiders and by the company of its own shares are made when their shares are relatively undervalued. In the case of insider purchases, however, several such studies have indicated that much of the market outperformance has come from companies with smaller market capitalizations and that insiders' future investment returns from buying the shares of their own larger market capitalization companies have been more modest. The studies that included some information about the relatively small outperformance of insider purchases of shares of larger market capitalization companies did not study the investment results of the most informed insiders—the top executives—in combination with valuation ratios and other fundamental financial information.

What follows herein is a description of a series of academic and empirical investment factor studies illustrating the investment results of copying the stock purchase transactions—often referred to as “coat-tailing”—of C-Suite executives and directors who purchase their own companies' shares, and of companies that buy back their shares, particularly when the company's shares are undervalued based on common value metrics.

Background: H. Nejat Seyhun's 1998 Insider Buying Study

One of the most interesting, and perhaps seminal, empirical studies of future investment performance following insiders' purchases of their own companies' shares was described in the book, ***Investment Intelligence from Insider Trading***, by Nejat Seyhun, the University of Michigan Chair of Finance and Jerome B. and Eileen M. York Professor of Business Administration, published in 1998 by Massachusetts Institute of Technology.

In the Seyhun study, the investment results following the purchase by a top executive of at least 1,000 shares of his/her company's own stock were computed, and these stocks were ranked on the price-to-earnings ratio and the price-to-book value ratio* at the time of purchase, and then sorted into five equal number groups of companies, or quintiles. Investment returns versus a market index were computed over a one-year holding period subsequent to the end of the month in which the insider purchase was made. The beginning stock prices used to calculate the one-year equal weighted holding period excess-of-market returns were the stock prices at the end of the month in which the insiders' purchases had occurred rather than the stock prices that the insiders had actually paid. Each year of stock returns was measured monthly from 1978 through 1993. The historical dataset consisted of New York Stock Exchange, American Stock Exchange and NASDAQ stocks.

The following two tables describe Professor Seyhun's studies of the one-year forward investment results, net of a stock market benchmark, of top executives' purchases of their own companies' shares in combination with the price/earnings ratio and the price/book value ratio valuation of the insider's particular company on the first day of the month immediately following the month in which the insider made his/her purchase.

* The price-to-earnings (P/E) ratio measures a company's stock price relative to its earnings-per-share. The price-to-book value ratio (P/BV) measures a company's stock price relative to its book value per share. Stocks priced at lower ratios of price-to-earnings or price-to-book value relative to other stocks are often considered to be undervalued.

Outperformance in Low P/BV Stocks Where Top Insiders Were Also Buying

Annual returns in excess of the market return for price/book value in combination with insider buying, 1978 – 1993

12-Month Investment Return Net of the Market Return

Price/Book Value Quintile	All Stock	Stocks With Any Insider Buyer	Stocks Where Top Executives Bought More Than 1,000 Shares
Lowest price/book value group	1.8%	5.1%	11.1%
Price/book value group 2	-0.8%	1.4%	6.3%
Price/book value group 3	-1.1%	1.9%	5.5%
Price/book value group 4	0.8%	-0.3%	0.6%
Highest price/book value group	-1.7%	0.0%	-2.6%

Source: ***Investment Intelligence from Insider Trading*** by H. Nejat Seyhun, Chair of Finance at the University of Michigan., Chapter 10, "Book to Market Ratio," Table 10.9, p. 259

Outperformance in Low P/E Stocks Where Top Insiders Were Also Buying

Annual returns in excess of the market return for price/earnings ratio in combination with insider buying, 1978 – 1993

12-Month Investment Return Net of the Market Return

Price/Earnings Quintile	All Stock	Stocks With Any Insider Buyer	Stocks Where Top Executives Bought More Than 10,000 Shares
Lowest price/earnings group	2.3%	3.8%	10.2%
Price/earnings group 2	0.1%	1.8%	2.7%
Price/earnings group 3	-0.9%	1.0%	7.0%
Price/earnings group 4	-0.5%	1.6%	2.8%
Highest price/earnings group	-2.2%	-0.4%	1.8%

Source: ***Investment Intelligence from Insider Trading*** by H. Nejat Seyhun, Chair of Finance at the University of Michigan., Chapter 9, "Price-Earnings Ratio," Table 9.8, p. 232

Tweedy Browne's Insider Studies

Tweedy, Browne's insider and company stock buyback historical study design and the multi-factor score and scoring methods described herein are proprietary and reflect study design judgments based on the analytical experience of Tweedy, Browne investment analysts.

Following in the footsteps of the Seyhun study, Tweedy, Browne's proprietary historical insider buying study encompasses 12,604 stock purchase transactions made by Chairmen, Chief Executive Officers, Presidents, Chief Operating Officers, Chief Financial Officers, and Treasurers in their respective companies over a 26-year period beginning with a transaction on July 23, 1996, and ending with a transaction on September 23, 2022.

The global study is comprised of four separate studies of insider purchase transactions pertaining to companies located in four separate country groups: 1. the United States, 2. countries in Europe whose shares trade in Euros (euro-currency Europe), 3. the United Kingdom, and 4. companies in Europe and other countries whose shares also trade in their home currencies (Non-euro Europe and Rest of World).

The 12,604 total global insider transactions were comprised of 5,081 transactions in the United States, 2,464 transactions pertaining to euro-currency companies located in Austria, Belgium, Finland, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Portugal, and Spain, 1,800 transactions in the United Kingdom, and 3,259 transactions in the Non-euro Europe and Rest of World group of companies, including companies located in Australia, Canada, Denmark, Iceland, New Zealand, Norway, the Philippines, Singapore, South Africa, South Korea, Sweden and Switzerland.

Companies in the study had minimum inflation-adjusted market capitalizations of $500 million (about $300 million 20 years ago). No company had a market capitalization of less than $300 million. The minimum transaction size for inclusion in the study was an insider purchase transaction of at least $100,000.

These "insider" stocks were then ranked using a proprietary multi-factor score, the total intrinsic value score, and sorted into ten deciles from the highest total intrinsic value score (the highest combination of value and other fundamental factors (more than 30 data items), including measures of management behavior, profitability, growth, leverage, stability and other custom proprietary data items) to the lowest total intrinsic value score (the lowest combination of value and other fundamental factors including measures of management behavior, profitability, growth, leverage, stability and other custom proprietary data items). Like the price-to-book and price-to-earnings ratios used by Seyhun, the total intrinsic value score is a proxy for identifying undervalued companies and, as described above, is a proprietary weighted combination of value-and other fundamental factors.

Cumulative returns earned by the C-suite executives from investing in their own companies' shares were computed over six months, one year, two years, and three years following the initial purchase. Mean average gross returns were then calculated for each decile and compared to relevant benchmark returns.

Benchmarks used for comparison purposes in the calculation of excess returns over 6-months, 12-months, 24-months, and 36-months holding periods were the Standard & Poor's 500 Index for US stocks, the STOXX 600, which is denominated in the euro (for euro-currency Europe stocks), and the FTSE 350 Index, which is denominated in British pounds (for UK stocks). Gross and excess returns for non-euro Europe and the Rest of World stocks were calculated by converting each company's investment returns into US dollar equivalent returns and subtracting the MSCI World Index, which is denominated in US dollars, from those US dollar equivalent gross returns.

The gross and excess investment returns for the various holding periods are shown as cumulative returns. For example, a stock in which the insider bought shares at a price of $100 per share that had 6 months, 12 months, 24 months, and 36 months cumulative gross returns of, respectively, 10%, 35%, 43% and -17%, would mean that the total value of a $100 per share initial investment would be, respectively, $110, $135, $143 and $83. The cumulative excess return of each stock in the study is the cumulative gross return minus the cumulative return of the respective benchmark.

While the cheapest two deciles of insider stocks produced large, out-sized index besting returns, a high percentage of the stocks within those deciles produced returns that did not beat their respective benchmarks. The returns are equally weighted *average* returns that include large winners *and large losers*. The study is a study of investment factors and, as such, does not describe any portfolio; rather, the study describes the average returns of an entire unsorted and undifferentiated dataset of individual stocks purchased by C-Suite executives in transactions that occurred at different historical points in time and that possessed the combination of characteristics described above.

Returns of Undervalued Stocks Throughout the World Where "C-Suite" Executives Made Material Purchases

Companies with insider purchases sorted from high to low into deciles based on their Total Intrinsic Value score (July 23, 1996 – September 23, 2022)

The stocks in the top two deciles, i.e. those stocks with the cheapest Total Intrinsic Value Scores, produced mean cumulative average gross returns in excess of the benchmark of 24.74 percentage points, and 8.14 percentage points, respectively, over the 24 months following purchase.

	Mean Cumulative Total Returns				Mean Cumulative Excess Returns*			
Decile	6 mos	12 mos	24 mos	36 mos	6 mos	12 mos	24 mos	36 mos
1 (Cheapest)	12.07	26.61	53.42	62.01	5.60	12.22	24.74	24.22
2	7.60	14.49	31.05	39.46	2.57	3.95	8.14	6.27
3	7.81	15.24	28.66	40.65	2.54	4.81	6.72	7.91
4	5.75	12.32	24.41	34.12	0.35	1.82	3.33	1.81
5	6.96	11.40	24.40	37.11	2.76	3.09	5.08	6.67
6	6.65	11.51	19.28	31.90	1.97	2.62	0.11	0.98
7	5.56	9.69	20.72	28.04	0.85	1.23	2.12	-1.08
8	5.27	10.33	20.80	28.89	0.90	0.55	-1.61	-6.49
9	6.12	8.45	15.79	24.36	1.57	0.05	-2.31	-5.81
10	2.71	5.60	11.06	18.00	-1.09	-2.29	-6.02	-9.90

* Excess returns = portfolio return - benchmark return

The sampling of 12,604 stock purchase transactions in the 26-year "insider" study was heavily weighted toward the years 2007 through 2022, a span of time that has been described as one of the worst relative performance periods for value stocks and active management. Over 80% of the insider transactions in the study had at least six months of investment returns occurring during this period (2007-2022). For example, a 2019 study from Buckingham Wealth Partners found that after 10 years, 85% of large-cap mutual funds underperformed the S&P 500, and after 15 years, nearly 92% trailed the index.

The Predictive Power of Corporate Buybacks Where C-Suite Executives Had Also Purchased Shares

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The companies in which we have our largest investments have all engaged in significant stock repurchases at times when wide discrepancies existed between price and value. As shareholders, we find this encouraging and rewarding for two important reasons – one that is obvious, and one that is subtle and not always understood. The obvious point involves basic arithmetic: major repurchases at prices well below per-share intrinsic business value immediately increase, in a highly significant way, that value.

The other benefit of repurchases is less subject to precise measurement but can be fully as important over time. By making repurchases when a company's market value is well below its business value, management clearly demonstrates that it is given to actions that enhance the wealth of shareholders, rather than to actions that expand managements domain but that do nothing for (or even harm) shareholders.

Warren Buffett

Berkshire Hathaway Letter, 1984

In a companion study utilizing the same 26-year global, 4-region dataset of insider purchase transactions, we examined the returns produced by the corporate buyback insider signal when coupled with undervaluation based on proprietary combinations of numerical characteristics, the value score, and where C-suite executives had recently made material purchases of their company's shares. The stocks ranked in the cheapest two deciles of the value score, and where the companies had repurchased their shares within three months before material insider buys by C-Suite executives, produced mean average gross returns that were significantly greater than their respective benchmarks over the 12-, 24-, and 36-month periods following the insider purchase. Note that the value score is a derivative subset of the total intrinsic value score, which consists of more than 30 data items including multiple value measures and other fundamental factors, such as management behavior, profitability, growth, leverage, stability, and other custom proprietary data items. Again, the return of any individual stock may differ significantly from the returns for its decile. The returns are equally weighted *average* returns that include large winners *and large losers* for each decile.

Returns of Undervalued Stocks Throughout the World Where the Company Had Bought Back Their Shares Within Three Months Prior to Material Insider Buys by C-Suite Executives

The top two deciles of companies with the highest Value Scores produced mean average cumulative returns over one, two, and three years that were far in excess of the returns produced by their respective benchmarks. For example, the top two deciles of stocks, each taken as a group, produced cumulative excess returns over 24 months that were 35.86% and 17.17% better than those of their respective benchmarks.

	Mean Cumulative Total Returns				Mean Cumulative Excess Returns*			
Decile	6 mos	12 mos	24 mos	36 mos	6 mos	12 mos	24 mos	36 mos
1 (Cheapest)	21.43	42.39	69.32	78.19	13.72	25.15	35.86	32.71
2	5.74	19.91	46.93	54.60	-2.39	4.98	17.17	15.22
3	5.50	12.51	29.76	44.50	-0.33	2.21	4.91	8.89
4	15.52	20.95	38.32	40.09	10.78	11.37	13.40	4.03
5	7.81	14.17	33.56	49.71	2.19	2.16	8.17	12.83
6	7.13	10.91	24.08	35.61	2.42	1.37	4.32	5.76
7	1.23	7.84	21.30	27.11	-2.75	-1.92	-3.59	-9.92
8	3.82	9.39	26.27	41.71	-0.55	0.45	4.26	6.41
9	7.34	5.58	13.94	25.87	3.36	0.15	-4.22	-3.41
10	8.00	12.65	18.05	26.95	2.69	2.03	-2.35	-4.31

* Excess returns = portfolio return - benchmark return

Final Thoughts

The preceding Tweedy Browne studies may be unique due mainly to our ability to download and connect over 26 years of insider transactions around the globe to historical point-in-time financial databases. This linkage has allowed us to examine, analyze, and score various publicly available historical ratios, fundamental financial information, and percentage change data items (over 100 different ratios and characteristics, including percentage change factors, have been examined) in combination with the insider purchase behavioral information signal (insiders' purchases and/or insider-directed buybacks of their own company's stock).

With this historical dataset, we have been able to measure and compare subsequent investment returns of various combinations of data. The findings of various empirical studies, including our own historical studies, support the notion that, *on average*, there is an excess return advantage for companies where knowledgeable corporate insiders have made material purchases of what appeared to be undervalued shares. The effectiveness of insider information when making investment decisions appeals to common sense and is supported by historical evidence. Time will tell whether this historical insider investment factor is statistically associated with excess returns in the future.

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Disclosures

All investing involves the risk of loss, including the loss of principal. Investing in foreign securities involves additional risks beyond the risks of investing in US securities markets. These risks, which are more pronounced in emerging markets, include economic and political considerations not typically found in US markets, including currency fluctuations, political uncertainty, different accounting and financial standards, different regulatory environments, and different market and economic factors in various non-US countries. In addition, the securities of small, less well-known companies may be more volatile than those of larger companies. Force majeure events such as pandemics, political upheaval and natural disasters are likely to increase the risks inherent in investments and could have a broad negative impact on the world economy and business activity in general. Value investing involves the risk that the market will not recognize a security's intrinsic value for a long time, or that a security thought to be undervalued may in fact be appropriately priced when purchased. Dividends are not guaranteed, and a company currently paying dividends may cease paying dividends at any time. Diversification does not guarantee a profit and does not protect against a loss in a declining market. The performance results reflected herein are over the course of many years and reflect multiple market cycles and varying geopolitical, market and economic conditions. Past performance is no guarantee of future results. There is no guarantee that trends will continue or will not reverse.

Information contained herein is derived from various sources as set out in the narrative. Although we believe the information provided by the sources to be accurate, we have not independently verified the information. The studies described herein rely upon vast amounts of data - "Big Data" - and extensive numbers of calculations. Although we believe that the data and calculations are correct and thus, the studies are accurate, we cannot guarantee 100% accuracy of the data or that calculation or other errors were not made.

Any tables or charts relating to performance are intended only to illustrate the market returns for the data set and historical periods shown. Such tables and charts are not intended to predict future performance and should not be used as a basis for making any investment decision. Tweedy has no obligation to update or amend such tables or charts.

The Standard & Poor's 500 Index is a market-capitalization -weighted index of 500 leading publicly traded companies in the US. The S&P 500 is widely regarded as the best single gauge of large-US equities. The currency in which this index is denominated is the US dollar.

The ST0XX Europe 600 Index, with a fixed number of 600 companies, represents large, mid and small capitalization companies across 17 countries of the European region. The currency in which this index is denominated is the euro.

The FTSE 350 Index is a capitalization-weighted index of 350 companies that represents approximately 90% of the United Kingdom equity market by capitalization. The currency in which this index is denominated is the UK pound.

The MSCI World Index is an index comprised of 1410 companies located in developed world markets which are weighted by their float, which is the number of shares that are available to the public, and which is calculated by subtracting the shares held by insiders and shares deemed to be closely held from the total number of shares outstanding. The currency in which the MSCI World Index is denominated is the US dollar.

Stock Buybacks: Companies that purchase—or buy back-- their own shares are often anticipated to perform well because buybacks are often a signal that a company's management believes its shares are undervalued. This positive signal from management may cause the value of such shares to rise. There is no certainty that management of a company undertook a buyback strategy because it believes its stock is undervalued; a company could be using buybacks to increase earnings per share or other ratios, to support or increase the stock price, to offset excessive dilution from the exercise of stock options, as a defensive measure, or to cut their own capital expenditures, thereby potentially limiting future growth.

International investing may be subject to special risks, including, but not limited to, currency exchange rate volatility, political, social or economic instability, less publicly available information, less stringent investor protections, poor corporate governance, restrictions on tender offers and mergers and acquisitions and shareholder activism and differences in taxation, auditing and other financial practices. Investment in emerging market securities involves greater risk than that associated with investment in securities of issuers in developed foreign countries. These risks include volatile currency exchange rates, periods of high inflation, increased risk of default, greater social, economic and political uncertainty and instability, less governmental supervision and regulation of securities markets, weaker auditing and financial reporting standards, lack of liquidity in the markets, and the significantly smaller market capitalizations of emerging market issuers.

Value investing involves buying stocks that are out of favor and/or viewed as undervalued in comparison to their peers or their prospects for growth. Securities of companies with micro-, small- and mid-size capitalizations tend to be riskier than securities of companies with large capitalizations. This is because micro-, small- and mid-cap companies typically have smaller product lines and less access to liquidity than large cap companies and are therefore more sensitive to economic downturns.