Does the Other January Effect Have Market Timing Ability?

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Abstract

The Other January Effect (OJE), which suggests positive (negative) equity market returns in January predict positive (negative) returns in the following 11 months of the year, does not outperform a buy-and-hold approach in the US equity market and therefore adds no value to market timers. There is also no evidence of the OJE working consistently on individual stocks or international markets. The OJE requirement that the abnormally high January return be observed imposes a large opportunity cost. We highlight potential pitfalls of inferring the market timing ability of the OJE from the spread of 11-month returns following positive and negative Januaries.

JEL Classification: G10, G11, G12, G14
Keywords: Other January Effect, January Barometer, Seasonality, Return Predictability, Quantitative Investment

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1. Introduction

The Other January Effect[1], which suggests positive (negative) returns in January predict positive (negative) returns in the remaining 11 months of the year is shown to be an accurate market timing tool in a recent study by Cooper, McConnell, and Ovtchinnikov (2006).[2] This finding has widespread implications for both the investment and academic finance communities[3] which is unsurprising given that the Other January Effect (hereafter OJE) has the potential to change views regarding the efficient market hypothesis. Unlike many anomalies, the OJE is easy to implement. It only gives one signal per year so transaction costs are minimal. Most interpret it to relate to market indices so short positions can be easily created. Moreover, the information required to open a position, namely the January return, is readily available. These features, combined with the Cooper, McConnell, and Ovtchinnikov (2006) finding that compensation for risk is an unlikely explanation for the OJE, imply that the profits generated by the OJE need not be very large to offset the costs incurred in implementing it. The OJE therefore appears to be an ideal market timing indicator that poses a new challenge for the efficient market hypothesis.

We demonstrate that the OJE is, in fact, a poor market timer. The Cooper, McConnell, and Ovtchinnikov (2006) approach of measuring the spread between 11-month returns following positive and negative Januaries gives the impression that the OJE has market timing ability, but this is illusionary. The statistical significance of the OJE spread should not

[1] The Other January Effect is also referred to as the "January Barometer". We follow Cooper, McConnell, and Ovtchinnikov (2006) and use the term the "Other January Effect" throughout this paper.
[2] Hensel and Ziemba (1995a) and Brown and Luo (2006) also find the Other January Effect is a good predictor.
[3] The importance of the implications of the OJE is reflected in Cooper, McConnell, and Ovtchinnikov (2006) winning the second place prize in the 2006 Fama-DFA competition for the best capital markets and asset pricing papers published in the Journal of Financial Economics. Cooper, McConnell, and Ovtchinnikov (2006, p. 338) conclude the following. First, "it [the OJE] appears to be a powerful tool in predicting the market." Second, "it [the OJE] should prove to be an important tool to portfolio managers". Third, "results could serve to heighten the debate over the source of the risk premiums in the Fama–French three-factor model". This study focuses on the first conclusion regarding the apparent market timing ability of the OJE because the second and third conclusions are irrelevant when the first one is invalid.

be interpreted as implying the OJE is useful for investors. We demonstrate that the OJE is inferior to a simple passive strategy of opening a 12-month long position at the beginning of January[4] in US equity indices, international equity indices, and portfolios of stocks of different sizes based on more common market timing measures, such as Sharpe Ratios, Jensen's Alpha, and the Manipulation-Proof Performance Measure of Ingersoll, Spiegel, Goetzmann, and Welch (2007). The OJE also has no predictive power in individual stocks. Our results call into question the strong following of the OJE amongst the practitioner community.[5]

There are several reasons why the OJE indicator adds no value when it is compared to a simple passive strategy (establishing a long equity market in January and holding this for 12 months) despite the appearance of superior predictive ability based on the Cooper, McConnell, and Ovtchinnikov (2006) approach of measuring the spread between 11-month returns following positive and negative Januaries. The first relates to the OJE requirement that the January return be observed before a decision to go long or short the market is made. As the extensive January Effect literature[6] documents, the US equity market tends to perform well in January. An investor applying a simple passive strategy captures these returns but anyone attempting to time the market using the OJE does not.[7] This fact is not picked up by the spread approach of Cooper, McConnell, and Ovtchinnikov (2006). A second aspect of the

[4] Of course, this strategy is effectively a buy-and-hold strategy. We refer to it as a strategy of buying in January and holding for 12 months so the reader can equate it to the Other January Effect which generates one trading signal per year.

[5] Cooper, McConnell, and Ovtchinnikov (2006), provide evidence of one of the first mentions of the January Barometer on p. 319. This is "We doubt that any technique or indicator ever devised has been so remarkably accurate as the January Barometer. The barometer, which indicates that as January goes, so will the market go for the total year, has proven correct in 20 of the last 24 years. The performance of this indicator becomes even more striking when you consider its simplicity, coupled with the fact that it is making its prediction eleven months in advance" (Hirsch, 1974, p. 11). We provide many more quotes from the financial media in Section 2.

[6] The interested reader should refer to Starks, Yong, and Zheng (2006) for an excellent review.

[7] The fact that the OJE has always been seen as independent of rather than complimentary to the January Effect is clear from the dates these two anomalies were first documented. The OJE was first published in 1973/1974 (e.g. Hirsch, 1974), yet the January Effect was not common knowledge at this point as it was not documented until Rozeff and Kinney (1976).

OJE underperformance relates to signals to short the market.[8] Based on a value-weighted index, which, as Fama (1998) notes, is the best weighting scheme to use when examining anomalies due to it giving the better representation of investor experience, 11-month returns following negative Januaries (i.e. periods when the OJE is short the market) are positive on average. A passive investor who is always long the market earns these returns but anyone adopting the OJE would incur losses on their short positions during these periods. This reinforces the fact that a finding of a positive spread due to larger average returns following positive Januaries than negative Januaries does not imply that the OJE is a successful market timing technique relative to a simple passive strategy.[9] The OJE is a poor market timer prior to the inclusion of transaction costs. Accounting for realistic transaction costs would only serve to further weaken the performance of the OJE versus a passive buy-and-hold approach.

To be sure, we suggest the OJE is even of little value to an investor who does not wish to have market exposure in January and simply wants to make a decision to go long or short the market for the February – December period.[10] Based on the VW index, which most closely resembles investor experience, a simple strategy of opening a long position at the beginning of February and holding this position for 11 months is superior to timing the market based on the OJE. Given that 11-month returns for periods following an OJE signal to short the market are positive on average a long-only investor makes profits during these

[8] It is clear that a negative January is said to indicate an 11-month return that is negative rather than one that is simply less than the 11-month return following positive Januaries. Hensel and Ziemba (1995a, p. 188) quote Hirsch (1986), who appears to have been the first to propose the OJE, as follows "The supposition is that: If the market rises in January, then it will also rise during the rest of the year; but if it falls in January, then there will be a decline during the rest of the year." In one of the earliest academic studies on the OJE, Fuller (1976, p. 5) notes "Supposedly, the January Barometer works like this: If the stock market is up in the month of January, then the market will be up for the year, if the market is down in January, the year will be down." Therefore the most logical way to exploit the OJE is to short the market following negative Januaries, rather than investing in T-bills in these periods.

[9] In Section 3 we also suggest that a data mined, modified OJE strategy of investing in T-bills for 11 months following a negative January, is unlikely to add value. 11-month returns following negative Januaries have tended to be lower than the 11-month returns following positive Januaries on average because negative Januaries have tended to occur in the middle of bear markets, rather than due to any timing ability of the OJE.

[10] In other words, they never want to be in the market in January so it is not fair to compare the performance of the OJE to that of a passive strategy, which would be in the market in January. Of course, it is not clear why an investor would have an aversion to being in the market in Januaries!

periods, but anyone following the OJE would incur losses and under-perform as a result. A data-mining driven hybrid strategy of always being long in January based on knowledge of the January Effect and then going long (short) for the next 11 months based on the actual January return, according to the OJE also does not outperform a passive long-only approach due to the 11-month periods following OJE signals to short the market being positive on average.

Our US size quintile results show the January Effect is largely responsible for the appearance of the OJE having timing ability based on the spread approach. US equity markets have generally performed well since 1940 with a bull market being in force in approximately 73% of all months.[11] Therefore in order for any month to "predict" 11-month returns it too must be positive a large proportion of the time. Consistent with the extensive January Effect literature (e.g. Keim, 1983; Seyhum, 1993), we find the January Effect is most prevalent in small stock portfolios. These portfolios have a higher proportion of positive January returns and, unsurprisingly, they also display the strongest OJE predictability based on the spread approach. However, we show this is somewhat illusionary as the OJE does not outperform a simple passive strategy of buying in January and holding for 12 months by more in small stock portfolios than in their large stock counterparts due to the opportunity cost of being out of the market in January being larger.

We also show that inferring the market timing ability of the OJE by measuring the spread of 11-month returns following positive and negative Januaries is inappropriate because the spread does not represent the returns experienced by an investor using the OJE. For instance, assume that during a three-year period January returns are positive in the first two years and the 11-month (February – December) returns are 8% for both these years. Assume that the third year has a negative January return and an 11-month return of 1%.

[11] See Gonzalez, Hoang, Powell, and Shi (2006) for details.

Based on these numbers the spread is 7% (8%-1%) but anyone adopting the OJE investor would experience an average return of 5% ([8%+8%-1%]/3).[12] This occurs because since the spread is the difference between two averages, observations are weighted rather than being treated equally. We illustrate this point further in Table 2. For instance in the ten year 1998 – 2007 period only one January return in the EW series was negative. This signal resulted in a loss of 8.77%. The spread approach averages the 11-month returns for the nine years that January was positive (9.30%) and deducts 8.77% to give a spread of 0.53%. However, an investor who used the OJE to time the market for this ten-year period would have received average returns of 7.49% per year. While the spread understates the actual returns the investor receives in this example, the spread overstates the returns to an investor using the OJE throughout our study in the 1940 – 2007 time period.

The investment and academic communities have focused on the predictive power of the OJE in equity market indices. We suggest the OJE should also show up in individual stocks if it has a behavioral explanation.[13] We investigate this using all stocks in the CRSP database over the 1940 – 2007 period based on the lower standard[14] of simply measuring whether the 11-month returns for stocks with positive Januaries are larger on average than the 11-month returns of stocks with negative Januaries. We find no evidence that stocks performing well (poorly) in January perform well (poorly) for the remaining 11 months of the year. January also appears to be a poor formation month for momentum trading strategies. A one-month formation / 11-month holding period momentum strategy works well on average and works particularly well when certain months of the year are used as the formation month

[12] The difference in the returns implied by the spread and those experienced by an investor remains intact regardless of whether discrete or continuous compounding is used.

[13] For instance, the momentum effect, which Hong and Stein (1999) suggest is due to investor under-reaction, exists in indices (e.g. Chan, Hameed, and Tong, 2000) and individual stocks (e.g. Jegadeesh and Titman, 1993; Rouwenhorst, 1998).

[14] We use the term "lower standard" because we show in this paper that simply having larger 11 month returns on average following positive Januaries does not necessarily imply superior market timing ability compared to a buy-and-hold approach.

(e.g. February, March, April, May, July, and September). However, the winner – loser returns are not statistically significant when January is the formation month.

The remainder of this paper is organized as follows. Section 2 provides evidence of the current focus on the OJE in the popular press, a discussion of the academic papers that have investigated the OJE, and possible explanations for its success. Our methodology and results are presented in Section 3. Section 4 contains robustness checks, while Section 5 concludes the paper.

2. Background on the OJE

In this section we provide evidence of the current focus on the OJE[15] in the popular press, discuss the academic literature, and consider possible explanations for the existence of the OJE.

2.1. Practitioner Focus

Cooper, McConnell, and Ovtchinnikov (2006) suggest the OJE was first mentioned by Yale Hirsch in his Stock Traders' Almanac publication in the 1970s. An example of Hirsch's endorsement of this indicator from his 1974 publication, which they provide on p. 319, is included below:

"We doubt that any technique or indicator ever devised has been so remarkably accurate as the January Barometer. The barometer, which indicates that as January goes, so will the

[15] As noted previously, many practitioners refer to the OJE as the "January Barometer" so we use this term in this section where we are quoting others.

market go for the total year, has proven correct in 20 of the last 24 years. The performance of this indicator becomes even more striking when you consider its simplicity, coupled with the fact that it is making its prediction eleven months in advance" (Hirsch, 1974, p. 11).

The OJE continues to attract widespread media attention. Selections of the headlines of stories devoted to it are included below:

"The January Barometers Score Again; How the S&P 500 goes for the first month can give a good reading of the year." (Sam Stovall, *Business Week Online*, 2 July 2003)

"January Barometer predicts a pretty lousy year; Month is turning out to be a loser, and chances are 2005 will be, too" (Adam Shell, *USA Today*, 31 January 2005).

"Molasses in January; A weak start -- like this year's -- can signal a bear market. Time to tread lightly?" (Marcia Vickers, *Business Week*, 31 January 2005).

"The January Barometer really works: Foretells market's future better than any other month" (John Dorfman, *Bloomberg News*, 1 February 2006).

"January Barometer' points to prosperity" (Tom Walker, *The Atlanta Journal – Constitution*, 1 February 2006).

"January Barometer' bodes well for 2007; Rosy start seen as reliably good sign for investors" (Adam Shell, *USA Today*, 1 February 2007).

2.2. Academic Papers

Two recent papers have found the OJE is an effective market timing technique when applied to US equity markets.[16] Cooper, McConnell, and Ovtchinnikov (2006) consider the ability of the OJE to predict returns from the perspective of the spread between 11-month returns following positive and negative Januaries in the US and find it has substantial power. They focus on the 1940 – 2003 period but they consider the robustness of their result using data dating back to 1825. Cooper, McConnell, and Ovtchinnikov (2006) show the OJE works in small and large stocks, value and growth stocks and persists after adjustment for macroeconomic and business cycle variables, investor sentiment, and the presidential cycle in stock returns. Brown and Luo (2006) consider the performance of the OJE in the US over a very similar period (1941 – 2003) and also find it has predictive ability.[17]

Three studies consider the performance of the OJE on international markets. Hensel and Ziemba (1995b) use MSCI data for the 1970 – 1993 period and find the OJE works well in Australia, Canada, Japan, and the U.K, but is less effective in Austria, France, Germany, and Switzerland. More recently, Bohl and Salm (2007) use MSCI data for the 1970 – 2006 period to test the performance of the OJE in Austria, Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Norway, Sweden, the U.K., and the U.S. They find the OJE only adds value in the Netherlands, Norway, and the US. In a closely related study, Easton and Pinder (2007) use indices from the Datastream and Computstat Global databases for 38 countries with a range of start dates from 1974 and a finish date of 2006. They find the OJE is only successful at timing the market in Italy, Norway, Thaliand,

[16] The earlier evidence is less conclusive. Hensel and Ziemba (1995a) find the OJE is an effective market timer but Fuller (1978) finds it is ineffective. However these papers do not consider the risk-adjusted performance of the OJE so their conclusions are difficult to relate to those from more recent studies.

[17] They also suggest the January Effect has implications for the OJE but they do not conduct the comprehensive examination into the interaction between January Effect and OJE that we do.

Zimbabwe, and the US. While it seems reasonable to draw the conclusion, based on the research cited above, that the OJE is mostly unreliable in international markets, the results do raise the question as to whether it is ever an effective market timer based on techniques that benchmark performance against a passive buy-and-hold approach and represent investor experience. None of the three studies cited above address this question. Rather the two most recent papers draw heavily on the 11-month spread approach of Cooper, McConnell, and Ovtchinnikov (2006). This paper considers this question and presents the results in Section 4.

2.3. Explanations

The OJE is inconsistent with the tenets of modern finance theory. It runs counter to the concept of weak form market efficiency (e.g. Fama, 1970) which suggests that past price information is not useful when it comes to predicting future price movements. Any anomaly which lacks a theoretical explanation is particularly exposed to the criticism that it is simply a statistical illusion so many researchers have turned their attention to potential explanations for anomalies. For instance, Hong and Stein (1999) develop the gradual information diffusion hypothesis where investors react slowly to information, as an explanation for the momentum effect. To the best of our knowledge there are no conclusive explanations for the OJE. However, we briefly discuss practitioner claims regarding the factors behind the OJE. Little and Albrecht (2006, p.3) state:

"The major marginal players in world equity markets are the major institutions. Powerful investment committees run these institutions. Calendar years for most start in January and the first investment results appear before these powerful committees in early February. These committees cannot afford to ignore what seems to be working. They launch funds in what

seem to be "hot" areas and allocate assets to likely winners, pushing up prices in those sectors. So – the argument goes – if you see what's been working at the end of January, you get an "inside feel" for what might work for the rest of the year."

Such behavior by investment committees appears consistent with Representativeness Bias, which was introduced by Kahneman and Tversky (1974). In other words, investors try and determine if it will be a positive year for the equity market via the use of the representativeness heuristic of January performance. However, the Little and Albrecht (2006) "theory" leaves many questions unanswered. For instance, as the month of January progresses and the likelihood of a positive (negative) return in January increases why don't rational market participants start going long (short) the market and in the process impound any impact of the OJE into price before the end of January? This would leave no reaction to the positive (negative) January return for the rest of the year.

3. Test Procedures and Empirical Results

In this section we discuss our data, present our methodology and results and discuss their implications. We use CRSP equally-weighted (EW) and value-weighted (VW) indices for our core analysis. CRSP data commences in 1925, but these data are very volatile during the 1930s due to the Great Depression. There is a lack of consensus on whether all available data should be used to protect against data mining criticisms, or whether these data from the 1930s should be treated as outliers and therefore excluded from analysis.[18] We conduct most of our analysis on data for the 1940 – 2007 period for two reasons. Firstly, we wish to ensure

[18] Jegadeesh and Titman (1993), Davis, Fama, and French (2000), and Chordia and Shivakumar (2002) all commence their analysis in 1925 or 1926, while Hong, Torous, and Valkanov (2007) use a start date of 1946.

comparability with previous the work of Cooper, McConnell, and Ovtchinnikov (2006) who use data commencing in 1940 for their core analysis. Secondly, we feel our result is stronger if we can show that the apparent market timing ability of the OJE is illusionary during a period in which it appears to have strong timing ability. We conduct robustness tests and show the OJE performs even more poorly when 1925 – 2007 data are used.

We also consider the performance of the OJE on international indices. We source MSCI total return data for 18 developed markets and the World, and World excluding US indices from Datastream. We are careful to ensure our results are not driven by small sample issues so we only include countries that have data starting in 1970. This means our data set contains data for the developed markets of Australia, Austria, Belgium, Canada, Denmark, France, Germany, Hong Kong, Ireland, Italy, Japan, Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the US, as well as the two world indices. All data cover the 1970 – 2007 period. We present results that relate to the US investor. Each index is in USD and our risk-free rate proxy is the US Treasury Bill Total Return Series from Global Financial Data.

3.1. Core Results

We follow the approach of Cooper, McConnell, and Ovtchinnikov (2006) and test the statistical significance of the OJE using indicator or dummy variable regressions. As the regression specification in equation 1 indicates, we regress the 11-month (February – December) return on a dummy variable that equals one if the return in January is positive and zero if the January return is negative. We are effectively conducting a difference in means test between 11-month returns following positive and negative January returns.

$$R_t = \alpha + \beta D_t + \epsilon_t \quad (1)$$

Where D_t = 1 if January return is positive and 0 otherwise and R_t is the 11-month (February – December) return.

Powell, Shi, Smith and Whaley (2007) show that standard OLS regression techniques can generate spurious results in time-series models involving indicator or dummy variables if the dummy variable is persistent. We adopt the Powell, Shi, Smith and Whaley (2007) methodology as a robustness test (results reported in Appendix 1) and find the apparent market timing ability of the OJE is not driven by dummy variable persistence. We therefore report unadjusted results (based on equation 1) in the body of the paper to allow comparison with those of Cooper, McConnell, and Ovtchinnikov (2006).

The regression specified in equation 1 is run over each series using three techniques to determine the standard errors: Ordinary Least Squares (OLS), Newey-West (1987) (NW), and the randomized bootstrap procedure of Cooper, McConnell, and Ovtchinnikov (2006) (BS). The bootstrap procedure is particularly important as promoters of the OJE may have considered using performance in non-January months as indicators for performance in the following 11 months in the first instance and only arrived at the OJE after this search. If this is the case then the OLS and Newey West (1987) techniques will overstate statistical significance as they do not account for data mining bias. The bootstrapping procedure adopted by Cooper, McConnell, and Ovtchinnikov (2006) explicitly controls for potential data mining bias by accounting for the other 11 months of the year as potential future 11-month performance indicators.

As noted by Cooper, McConnell, and Ovtchinnikov (2006, p. 319), the investment community appears to interpret the OJE, which is often expressed as "as January goes, so will

the market go for the total year" based on raw returns so we use raw returns in our core analysis. A second reason for us favoring raw rather than excess returns is due to the fact they minimize the chance of misrepresenting investor experience. For instance, assume the January excess return is negative and the February – December raw equity market, risk-free, and excess returns are 3%, 5%, and -2% respectively. It could be assumed that the profit from the short position, based on excess returns, is -(3%-5%) or 2%, However, this interpretation does not reflect the meaning of excess returns, which compare the investment performance with the long risk-free return. In fact, an investor short the market would earn a return of -3% so their excess return would be -3% - 5% or -8%.

The practitioner literature makes it clear that a negative January indicates an 11-month return that is negative rather than just less than the 11-month return following positive Januaries. Hensel and Ziemba (1995a, p. 188) quote Hirsh (1986), who appears to have been the first to propose the OJE, as follows "The supposition is that: If the market rises in January, then it will also rise during the rest of the year; but if it falls in January, then there will be a decline during the rest of the year." In one of the earliest academic studies on the OJE Fuller (1976, p. 5) notes "Supposedly, the January Barometer works like this: If the stock market is up in the month of January, then the market will be up for the year, if the market is down in January, the year will be down." More recently, Brown and Luo (2006) use the same Hirsh (1986) quote as they set the scene for this study of the OJE. It therefore seems clear that the most logical way to exploit the OJE is to short the market following negative Januaries, rather than investing in Treasury Bills in these periods.

The Cooper, McConnell, and Ovtchinnikov (2006) approach does not indicate whether the OJE adds value based on commonly accepted definitions of market timing ability. It makes no reference to its performance relative to a simple passive strategy of opening a long equity market position in January and retaining this position for 12 months (of

course, this is equivalent to a buy-and-hold approach). We apply the two most commonly used market timing techniques, Jensen's Alpha (see Jensen, 1969) and Sharpe Ratios (see Sharpe, 1966) and also the recently developed Manipulation-Proof Performance Measure (hereafter MPPM) of Ingersoll, Spiegel, Goetzmann, and Welch (2007). Both the Jensen's Alpha (we use the three Fama and French (1993) factors and the Carhart (1997) momentum factor to determine Jensen's Alpha) and Sharpe Ratio approaches are well described in the literature so we do not discuss them in detail here.

Ingersoll, Spiegel, Goetzmann, and Welch (2007) point out that traditional performance measures, such as Sharpe Ratios and Jensen's Alpha, can each suffer from two weaknesses. Firstly, they are based around the assumption that return distributions are normal or lognormal. Secondly, they must be estimated using statistical techniques which assume independent and identically distributed variables.[19] The MPPM is given below:

$$\hat{\Theta} \equiv \frac{1}{(1-\rho)\Delta t} \ell n\left(\frac{1}{T} \sum_{t=1}^{T} \left[(1+r_t)/(1+r_{ft}) \right]^{1-\rho} \right) \tag{2a}$$

$$\Re_{f,\hat{\Theta}} = \exp\left(\ell n(1+r_{ft}) + \hat{\Theta}\Delta t \right) - 1 \tag{2b}$$

In effect, the $\hat{\Theta}$ statistic is an estimate of the excess returns certainty equivalent of a portfolio (over an above the risk-free asset) generated after adjusting for risk. The portfolio's un-annualized return at time t is r_t, and the risk-free rate is rf_t. T is the total number of observations, and Δt is the length of time between observations. Together these two variables

[19] The MPPM, which is not dependent on these limiting assumptions, generates a score which is "(1) increasing in returns (to recognize arbitrage opportunities), (2) concave (to avoid increasing the score via leverage or adding unpriced risk), (3) time separable to prevent dynamic manipulation of the estimated statistics, and (4) has a power form to be consistent with an economic equilibrium." (Ingersoll, Spiegel, Goetzmann, and Welch, 2007, p. 1506).

annualize the measure. ρ is risk aversion coefficient. Higher values of ρ penalise risk more strongly. The $\Re_{f,\hat{\Theta}}$ is the return of a risk-free portfolio that has a measured performance of $\hat{\Theta}$ (see Ingersoll, Spiegel, Goetzmann, and Welch, 2007, for more details).

We utilize the MPPM measure to test the risk-adjusted returns of the OJE by applying it to a portfolio that is invested based on the OJE (i.e. returns are equal to a long (short) position in the market from February – December if the January return is positive (negative)) and a portfolio invested based on a passive 12-month long-only strategy (i.e. returns are equal to the market portfolio). In accordance with Ingersoll, Spiegel, Goetzmann, and Welch (2007) we test three different risk-aversion coefficients ($\rho = 2$, $\rho = 3$, $\rho = 4$).

The results presented in Table 1 relate to the 1940 – 2007 period. The starting point is identical to Cooper, McConnell, and Ovtchinnikov (2006). The Panel A results indicate that 11-month returns are, on average, larger following positive Januaries than negative Januaries. The null hypothesis of a spread of zero is strongly rejected for each series by all three regression techniques. Our results are very similar to those of Cooper, McConnell, and Ovtchinnikov (2006). For instance, the spread we document for VW is 11.17% and theirs is 11.90%. The minor differences can be attributed to our different data ending points. We use four more years of data (2004 – 2007) than they do.

The Panel B results indicate the OJE does not outperform a passive strategy (PS) in both the VW and EW series. Average returns are lower (8.82% for the OJE versus 12.68% for PS in the VW series) and Sharpe Ratios are also lower (0.280 for the OJE compared to 0.493 for PS in the VW series). These indicate that while positive January returns signal 11-month returns that are larger than those signalled by negative January returns anyone acting on the OJE signals would under perform a passive buy-and-hold approach.

[Insert Table 1 About Here]

There are at least two reasons for this. Firstly, the OJE requires the observation of the return in January before generating a signal to go either long or short the market. An investor using the OJE would only earn the T-bill rate of return in January. As noted by Starks, Yong, and Zheng (2006) and many others, US equity market returns tend to be positive in January which means a passive long-only investor benefits from being in the market in January. Secondly, based on the VW series 11-month returns following negative Januaries are positive on average. An OJE investor would be short the market during these periods which would further erode their wealth compared to the passive investor who would earn positive returns in these periods. This is particularly important as Fama (1998, p. 296) notes that "that value-weight returns give the right perspective on an anomaly because they more accurately capture the total wealth effects experienced by investors."

As noted in Section 3.1, proponents of the OJE make it clear that a negative return in January signals a negative return in the next 11 months. This implies it is logical for someone following the OJE to go short the market for 11 months if a decline occurs in January. While, the Table 1 Panel A results indicate the 11-month return in the VW series following negative Januaries is positive, which implies losses to short positions on average, it is less than the average 11-month return following positive Januaries. This raises the question of whether a modified data mined OJE strategy developed with the benefit of hindsight, that involves investing in T-bills following negative Januaries could add value. We suggest this is unlikely. Rather, it is highly likely the differences in 11-month returns following positive and negative Januaries can be attributed to bull and bear market cycles. Gonzalez, Hoang, Powell, and Shi (2006) document the market has spent much longer in bull phases since 1940 (72% of all months) but there have been 20 bear markets.[20] The majority of these commence in a month other than January (19 out of 20). This implies the 11-month returns following negative

[20] See their Table 1A. Their analysis concludes in 2001.

Januaries have tended to be lower than the 11-month returns following positive Januaries because negative Januaries have tended to occur in the middle of bear markets. It is likely that the 11-month returns following negative Januaries are less positive rather than negative on average because only 15 of the 23 negative Januaries occur in bear markets and, according to Gonzalez, Hoang, Powell, and Shi (2006) Table 1A, bear markets only last an average of 10 months.

The Jensen's Alpha results in Panel C are consistent with the Sharpe Ratio results. Based on a model using the Fama and French (1993) factors and the Carhart (1997) factor[21], OJE alphas are not statistically significant in either the VW or EW series and the alpha for the VW series is actually negative. The MPPM of Ingersoll, Spiegel, Goetzmann, and Welch (2007), which overcomes some deficiencies of the Sharpe Ratio and Jensen's Alpha approaches, also generates consistent results. The MPPM results we present are the equivalent return of a risk-free portfolio that would have a measured performance of $\hat{\Theta}$ in equation 2b ($\Re_{f,\hat{\Theta}}$). The Panel D results clearly show that the OJE generates lower equivalent risk-free returns than the buy-and-hold approach under all three risk-aversion coefficient scenarios ($\rho = 2$, $\rho = 3$, $\rho = 4$). It is worth highlighting that we demonstrate the OJE is a poor market timer even before realistic transaction costs are attributed to this strategy. Including these costs would increase the margin by which the OJE underperforms.

The Cooper, McConnell, and Ovtchinnikov (2006) approach is not consistent with investor experience. Returns following positive (negative) Januaries are averaged and the difference between these is the spread, which is deemed to be a measure of OJE performance. However, the spread does not represent investor experience as it does not give an equal

[21] We thank Ken French for making factor return data available on his website.

weighting to each 11-month return observation.[22] As an example, assume the following: During a three year period, January returns are positive in the first two years and the 11-month (February – December) returns are 8% for both years. Further assume that the third year has a negative January return and an 11-month return of 1%. These numbers imply that the spread is 7% (8%-1%). However, anyone adopting the OJE investor would experience an average return of 5% ([8%+8%-1%]/3).

We illustrate this point in Table 2. For the ten year 1998 – 2007 period only one January return in the EW series was negative. This signal to go short the market was a particularly unprofitable one, as the February – December market return that followed was 8.77%. Given the OJE was short the market the loss was -8.77%. The spread approach averages the 11 month returns for the nine years that January was profitable (9.30%) and deducts 8.77% to give a spread of 0.53%. However, an investor who used the OJE to time the market for this ten year period would have received average returns of 7.49% per year. In this particular subset of the data the spread understates the actual returns the investor receives. Our results in Table 1 indicate that it is more common for the spread to overstate the returns to an investor adopting the OJE. For instance, the spread for the VW index is 11.17%, yet the average 12-month return for an OJE market timer is 8.82%. Similarly, the spread is 16.71% based on the EW index, but the OJE return is 12.06%.

[Insert Table 2 About Here]

[22] We realize that the dummy variable approach used by Cooper, McConnell, and Ovtchinnikov (2006) is popular in empirical research. While it never represents investor experience, we suggest the discrepancy between the spread and investor experience is a bigger than usual issue in this setting for a number of reasons. We only have one observation per year, or 68 in total, and the observations are skewed towards positive months. For instance, in the EW series there are 55 positive Januaries versus 13 negative Januaries.

As noted earlier, one of the reasons that the OJE is a poor market timer relates to its use of January as a conditioning month. Anyone using the OJE to time the market would remain invested in T-bills in January and then go long (short) the equity market if the January return is positive (negative). The extensive literature on the January Effect documents that returns in the US equity market tend to be larger in January than in other months, on average, but someone following the OJE misses out on these returns. Streetlore makes it very clear that the OJE makes a prediction for the remainder of the calendar year (February – December), but we test a modified version of the OJE that remains invested for 12 months. If the market advances (declines) in January this strategy involves opening a long (short) position in February and holding this position until the end of the following January. We should note that this strategy, which is essentially combining knowledge of the OJE and the January Effect involves data mining bias[23] but it does serve to illustrate that the OJE remains a poor market timer. Our 12-month OJE results, which are presented in Appendix 2, make it clear that the OJE is a poor market timer even when this adjustment is made.

We also consider the case of the investor who does not ever want to have market exposure in January. It is not clear to us why an investor would take this position, but we investigate the implications of this extreme position nonetheless. One the face of it, the OJE is a particularly appropriate market timing tool for such an investor as it never involves an equity market position in January. Moreover, it is unfair to use the returns from a 12 month (January – December) passive strategy as the benchmark in this case. We therefore test whether the OJE is a superior market timer to a simple strategy of taking an 11-month long position every year for the February – December period, regardless of the direction the market takes in January. The results of this strategy, as presented in Appendix 3, make it

[23] As noted in the introduction, the OJE pre-dates the January Effect. Hirsch (1974) documents the OJE in 1974 yet the first mention of the January Effect was not until Rozeff and Kinney (1976).

clear that the OJE is an inferior market timer to the simple 11-month long-only strategy based on the value-weighted index. This is important as Fama (1998) notes that the value-weighted index is the one that most closely resembles investor experience. Anyone attempting to use the OJE to time the market would experience returns identical to an investor following the 11-month long-only approach in all periods except in the 11-month periods following negative Januaries. The OJE investor would lose money on their short positions in these periods whereas the 11 month long-only investor would make gains.

Next, we test a strategy that uses prior knowledge that January tends to be a good month to be in the market to construct a strategy that is long the market every January and then goes long (short) for the next 11 months if the January return is positive (negative). As the results presented in Appendix 4 indicate, this data mined hybrid January Effect / OJE strategy also does not outperform the simple 12-month long-only approach in the VW index. The OJE investor would again lose money on their short positions in these periods whereas the 12 month long-only investor would make gains.

We apply the OJE as it was intended (i.e. we invest in Treasury Bills in January and observe the market return and then open long or short positions and hold these for the remaining 11-months of the year) for the remainder of this paper. This ensures consistency with proponents of the OJE who claim "as January goes, so will the market go for the total year" (see Cooper, McConnell, and Ovtchinnikov (2006, p. 319)).

We now consider the impact of using all available CRSP data rather than following the somewhat arbitrary start point of 1940.[24] Cooper, McConnell, and Ovtchinnikov (2006) note that 1940 is the start point that some practitioners have used in the data they present to back up their assertions regarding the market timing ability of the OJE, but this in itself does

[24] Cooper, McConnell, and Ovtchinnikov (2006) conduct preliminary tests on data dating back to 1825 but their comprehensive analysis focuses on data commencing in 1940.

not seem a strong reason to not use all CRSP data. However, we recognize that there is a lack of consensus in the literature regarding whether all available data should be used to protect against data mining criticisms or whether extreme data points, such returns in the 1930 – 1939 period should be omitted. For instance, Jegadeesh and Titman (1993), Davis, Fama, and French (2000), and Chordia and Shivakumar (2002) all commence their analysis in 1925 or 1926, while Hong, Torous, and Valkanov (2007) use a start date of 1946. Our Appendix 4 results confirm that the OJE performs poorly (i.e. underperforms a buy-and-hold approach by more) when all CRSP data are used. For the remainder of our analysis we use the start point of 1940 for two reasons. Firstly, we wish to ensure comparability with previous the work of Cooper, McConnell, and Ovtchinnikov (2006). Secondly, we feel our result is stronger if we can show that the apparent market timing ability of the OJE is illusionary during a period in which it appears to have strong timing ability.

4. Robustness Checks

4.1. The Performance of the OJE in Stocks of Different Sizes

Cooper, McConnell, and Ovtchinnikov (2006) show the OJE is particularly profitable on small stocks when their spread method is used. We therefore consider the market timing ability of the OJE versus a simple passive strategy of taking a 12-month long-only position each January in five quintile portfolios over the 1940 – 2007 period.[25] It is well known that stock markets increase over time. In addition, the period since 1940 has generally been a good one for stock markets. Gonzalez, Hoang, Powell, and Shi (2006) show there was a bull

[25] We thank Ken French for making these data available on his website.

market approximately 72% of the time since 1940.[26] This is consistent with the CRSP VW data which shows 11-month February – December returns are positive 79% of the time over the 1940 – 2007 period. It therefore follows that any month that is going to "predict" the next 11 months during the period of our study based on the spread approach must be positive a large proportion of the time. It has been extensively documented that there is a January Effect in US stocks. Average returns are larger in January and there is a greater probability that returns in January will be positive.[27] It is also well documented that the January Effect is more prevalent in small stocks. (e.g. Keim, 1983; Seyhum, 1993). We therefore suggest that it is reasonable to have the prior that the spread between 11-month returns following positive and negative Januaries will be larger in small stocks due to the January Effect.

The Table 3 Panel A results indicate this is the case. The smallest stock quintile has positive January returns 88.2% (60 / 68) of the time compared to a positive return for non-January months 58.2% of the time (not shown). The proportion of positive Januaries declines as the quintile size increases. They are 70.6%, 67.6%, 66.2%, and 64.7% in quintiles 2, 3, 4, and 5 respectively. Consistent with our prior, the spread between 11-month returns following positive and negative Januaries is substantially larger in quintile 1 (21.84%) than other quintiles. As with the proportion of positive January returns, the spread declines in a linear fashion as the size quintiles increase, from 11.61% in quintile 2 to 9.65% in quintile 5.

Comparing the Panel A and B results reveals two important points. Firstly, the potential for large mismatches between the spread and investor experience. The average return to an investor using the OJE to time the market on the (smallest) quintile 1 portfolio is 13.5% whereas the spread is 21.8%. Secondly, while the spread is substantially larger for small quintile stocks than their large counterparts, the underperformance of the OJE is also

[26] This is based on data presented in their Table 1A. Their analysis concludes in 2001.
[27] Haug and Hirschey (2006) show this is particularly prevalent when indices are equally weighted.

more pronounced in the small quintiles. Based on raw returns the underperformance is -8.4% for quintile 1, and -6.7%, -6.6%, -6.1%, -4.9% for quintiles 2, 3, 4, and 5 respectively. This is also due to the January Effect. Being out of the equity market in January has a larger opportunity cost in the smallest quintile given the January Effect is strongest in this quintile. In summary, we suggest the January Effect gives the impression that the OJE performs better in portfolios of small stocks based on the spread approach, but the reality is that its market timing ability is weakest in these portfolios on a pre-risk adjusted basis. The Panel B, C, and D results indicate the OJE also underperforms the passive buy-and-hold approach after risk is accounted for. Sharpe ratios are lower for the OJE on all size quintile portfolios; the alphas are always negative and the MPPM equivalent risk-free returns are always lower for the investor who times the market using the OJE.

When combined with core results, the size quintile results clearly illustrate that the OJE is of little use to an investor, even if they have no interest in being in the market in January and simply want to use the OJE to make a decision about going long or short for the February – December period.[28] Based on the VW index, which most closely resembles investor experience, the 11-month returns for periods following an OJE signal to short the market are positive. The implication of this is that anyone following the OJE would incur losses in these periods. The 11-month returns following OJE signals to go long the market are positive, on average, which leads to profits for the OJE investor. However, these positive returns are no different to what one would expect for the period we study, or in fact most long-term periods without any reference to the OJE. After all, markets have historically spent longer in bull than bear phases over the longer term.

[Please Table 3 About Here]

[28] As noted in the introduction, it is not clear why an investor would have an aversion to being in the market in Januaries, but if they did it would be unfair to compare the performance of the OJE to that of a buy-and-hold strategy, which would be in the market in January.

4.2. The Performance of the OJE in Individual Stocks

We now focus on the results generated from applying the OJE to individual stocks. We begin this section with a stylized example of how entirely different levels of performance by the OJE in individual stocks can result in an identical view of the accuracy of the OJE if one solely considers an index. We realize that most interpret the OJE as applying to the market in general rather than individual stocks. However, we believe that there should be a pattern of the individual stocks that have positive (negative) January returns being those stocks that have positive (negative) 11-month returns if there is a behavioral reason behind the OJE. For instance, the momentum effect, which Hong and Stein (1999) suggest occurs as a result of investor under-reaction, has been shown to exist in stock indices (e.g. Chan, Hameed, and Tong, 2000) and individual stocks (e.g. Jegadeesh and Titman, 1993; Rouwenhorst, 1998).

In order to illustrate that a difference in the 11-month market returns following positive and negative January market returns does not necessarily imply the same pattern in individual stocks we consider a simple setting where there are just four stocks in Table 4, although our logic applies equally well to settings where there are numerous stocks. Under Scenario A the OJE is 100% accurate on individual stocks. Each time a stock records a positive (negative) return in January it goes on to record a positive (negative) return for the remaining 11 months of the year. A market index would also show that the OJE was accurate in this particular year (i.e. the January market return is positive at 1% and the February – December market return is also positive at 10%) We assume an equally weighted market index to keep things simple but our logic holds for a market weighted index as well. In Scenario B the OJE is 100% inaccurate. Each time a stock records a positive January return it goes on to experience a negative February – December return and vice versa. However,

despite the inaccurate performance at stock level, the OJE still has precisely the same performance at index level. As in Scenario A the index gains 1% in January and 10% for the year. Finally, in Scenario C the OJE is accurate on individual stocks 50% of the time, yet at the market level its performance is identical to Scenarios A and B. We contend that this indicates that the performance of the OJE in an index does not imply anything about its performance in individual stocks.

[Please Table 4 About Here]

In order to test the performance of the OJE in individual stocks we use all stocks in the CRSP database for the 1940 - 2007 period. In Figure 1 we graph, for each year, the mean 11-month returns for stocks that had a positive return in January (light colored bars) versus the mean 11-month returns for stocks that had a negative return in January (dark colored bars). If there is a behavioral reason behind the apparent success of the OJE in the US it seems reasonable to expect this to show up in individual stocks. In other words, one would expect the 11-month returns for stocks with a positive return in January to be consistently higher than the 11-month returns for stocks with a negative return in January, on average. The results presented in Figure 1 illustrate that this is not the case. There is no clear trend of higher 11-month returns for positive January return stocks. The first six years of data have a pattern which is indicative of the entire data set. Positive January return stocks have lower 11-month returns (than their negative January return counterparts) in 1940, 1941, 1946 (three out of the six years). Over the entire 68 year period, stocks with positive January returns only have 11 months returns higher than their negative January return counterparts in just 39 years, or 57% of the time.

[Please Insert Figure 1 About Here]

We present the results of the formal comparison of the mean and median 11-month returns for individual stocks that have positive and negative January returns in Table 5. This analysis includes all stocks in the CRSP database over the 1940 - 2007 period. Over the 68 year period we study the mean 11-month return for stocks that have a positive return in January is 11.25%, compared to 10.15% for stocks that have a negative January return. This difference is not statistically significant. In the sub-samples of years where the market is up in January and down in January the 11-month returns for stocks with a positive January are slightly higher than the 11-month returns for stocks with a negative January, but these differences are also not significant.[29]

The median results in Panel B also strongly indicate that there is no statistically significant difference between 11-month returns for stocks with positive and negative January returns. Over all 68 years, stocks with positive January returns only outperform stocks with negative January returns by 0.01%. This situation is reversed in the sub-sample of years with negative market performance in January. The average 11-month return for stocks with positive January returns is -7.29% compared to -5.92% for stocks with negative January returns. However, none of these differences are statistically significant based on the non-parametric Kruskal-Wallis test. We suggest that our results provide strong evidence that there is no behavoral reason behind the apparent market timing ability of the OJE.

[Please Insert Table 5 About Here]

[29] It is important to note that the average 11-month return following positive and negative Januaries in Panel A of Table 5 cannot be equated to the 11-month returns for the EW market index from Table 1. This is because in Table 1 a long (short) position is opened in periods when the market index is greater (less) than zero in January, but in Table 5 a long (short) position is created in individual stocks based on performance of the stock in January. This means there are years when the market is down in January so an 11 month short position is established yet there are some stocks with positive January returns so a long position is created in those stocks.

4.3. The Performance of Momentum Trading Strategies that use January as the Conditioning Month

Since the seminal work of Jegadeesh and Titman (1993) many authors have shown that momentum trading strategies are profitable. These strategies involve measuring the stock performance over a formation period and buying strongly performing stocks (winners) and short-selling poorly performing stocks (losers). Jegadeesh and Titman (1993) show momentum strategies are profitable across a range of formation and holding periods from 3 to 12 months. The OJE is similar to momentum in some ways but it is also different in that unlike momentum trading strategies OJE strategies are not self financing. In any given year the OJE will signal either a long or short position for the February – December period (based on the performance of the market in January). Conversely, momentum strategies involve being simultaneously long winner stocks and short loser stocks.

We use a modified momentum strategy to give insight into the usefulness of January returns for predicting future returns. We suggest that if returns in January are poorer predictors of future returns than the returns of other months of the year there is further reason to question the predictive ability some have attributed to the OJE. The first step is to determine if a one month formation / 11-month holding period momentum trading strategy is profitable. Using all stocks in the CRSP database over the 1940 – 2007 period we show that it is. The results in Table 6 show the winner – loser 11-month spread is 2.40% and this is statistically significant at the 1% level. When either February, March, April, May, July or September are used as the formation month the momentum strategy is particularly powerful. However, this is not the case when January is the formation month. In this instance the spread between winner and loser returns is not statistically significant. We interpret this as

suggesting returns in January are not useful at conveying information pertaining to returns for the following 11 months of the year.

[Please Insert Table 6 About Here]

Doran, Jiang, and Peterson (2008) provide a possible explanation for the poor performance of the OJE in individual stocks and momentum strategies that use January as the formation month. These authors find a strong positive relation between idiosyncratic volatility and returns in January even though the relation is negative in other months. Based on the work of Barberis and Huang (2007) and Thaler (1985) they suggest investors have a predisposition towards selecting stocks with lottery features at the turn of the year. These stocks perform well in January but under-perform for the remainder of the year.

4.4. The Performance of the OJE in International Markets

As mentioned in Section 2, three previous studies have considered the market timing ability of the OJE on international markets. Using MSCI data for the 1970 – 1993 period Hensel and Ziemba (1995b) find evidence the OJE is successful in Australia, Canada, Japan, and the U.K. However, they show it is less successful in Austria, France, Germany, and Switzerland. Bohl and Salm (2007) use MSCI data for the 1970 – 2006 period and find the OJE only adds value in the Netherlands, Norway, and the US. They show it does not appear to work in the majority of European countries they consider. Using Datastream and Computstat Global databases for 38 countries with a range of start dates from 1974 and a finish date of 2006 Easton and Pinder (2007) find the OJE is only successful at timing the market in Italy, Norway, Thaliand, Zimbabwe, and the US. Based on the research cited

above, it seems reasonable conclude that the OJE is mostly unreliable in international markets. However, the results do raise the question as to whether it is ever an effective market timer based on techniques that represent investor experience and benchmark performance against a passive strategy of opening a 12-month long position in January. The three studies cited above do not address this question. Rather the two most recent papers draw heavily on the 11-month spread approach of Cooper, McConnell, and Ovtchinnikov (2006).

We investigate the market timing ability of the OJE in the developed markets of Australia, Austria, Belgium, Canada, Denmark, France, Germany, Hong Kong, Ireland, Italy, Japan, Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the US. We also consider its performance in the World Index and the World Index excluding the US. We initially intended to consider all countries in the MSCI but we decided to limit our analysis to the countries specified above as these are the countries for which data commences in 1970. This should ensure our results are not being driven by small sample issues. All data are MSCI total return data in USD sourced from Datastream for the 1970 – 2007 period. We present results in Table 7 that relate to the US investor. Each index is in USD and our risk-free rate proxy is the US Treasury Bill Total Return Series from Global Financial Data.

[Please Insert Table 7 About Here]

Our results are not directly comparable with those of the three studies cited above for a number of reasons. Firstly, we use more observations for each country than the three earlier papers. The most comparable time frame is that used by Bohl and Salm (2007). They use MSCI data for the 1970 – 2006 period which is only one year shorter than ours. However, rather than just presenting spread results, they present results to their spread dummy variable

regressions which also include other control variables. Nonetheless, despite these differences, our core spread results are broadly consistent with those of earlier studies. We find the difference between average returns following positive and negative Januaries is only statistically significant in a minority of countries (4 out of 17 non-US countries). The non-US countries that have statistically significant spreads include Japan, the Netherlands, Spain, and the United Kingdom.

The scope for the spread to misrepresent investor experience documented earlier is evident from a comparison between columns 1 and 2. Spain's spread is 22.64% yet the average return to the OJE trading rule is just 13.02%. Japan's spread is 23.14% compared to an OJE trading rule average return of 12.82%. The OJE is an inferior market timer to a simple long-only passive approach in every country from a raw return perspective. Risk-adjusted returns to the OJE are also lower than the buy-and-hold return in every country based on Sharpe Ratios, Jensen's Alpha[30], and the Manipulation-Proof Performance Measure (MPPM) of Ingersoll, Spiegel, Goetzmann, and Welch (2007). Our results clearly indicate that the OJE is not a successful market timer in any of the international markets we consider.

5. Conclusions

The Other January Effect (OJE) suggests that the performance of equity markets in January is indicative of their performance in the remaining 11 months of the year. Positive (negative) returns in January are said to predict positive (negative) February – December returns. Recent papers find that the OJE is a successful predictor of returns which has implications for market efficiency and asset pricing in general.

[30] Given the lack of Fama-French (1993) factor data for a number of the countries we consider, we estimate Jensen's alpha based on the CAPM.

This paper proves that the OJE is not an effective market timer. In accordance with earlier studies, we find that 11-month returns are, on average, larger following positive Januaries than negative Januaries in US indices. However, we show that measuring OJE performance using this approach is sub-optimal as it does not benchmark returns against a passive strategy or resemble investor experience. When more appropriate measures of OJE timing ability are adopted its inferior performance is clearly evident. There are several aspects to the underperformance of the OJE. Firstly, it requires the January return to be observed prior to a signal being generated to go long or short the market. January returns tend to be larger than the monthly returns of other months in the US so remaining out of the market in January incurs a relatively large opportunity cost. Secondly, 11-month returns following negative Januaries in the value-weighted index, which closely resembles investor experience, are positive on average. The OJE is short the market during these periods so losses are incurred. This results in it underperforming a simple strategy that is long the equity market every February to December. It is possible that a modified OJE that involves investing in T-bills or a combination of T-bills and stocks following a negative January could add value. However, we are mindful that the merits of these strategies are only evident with the benefit of hindsight and therefore involve a degree of data mining bias.

Moreover, there is no conclusive evidence that the OJE is present in individual US stocks or international indices. We therefore question the market timing ability ascribed to the OJE by many financial media. The strong standing of the OJE with practitioners appears to be misplaced.

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Table 1. Core Results

Panel A – OJE Basic Test

	Positive Jan		Negative Jan		Spread	P-Value	P-Value	P-Value
	Return	N	Return	N		OLS	NW	BS
VW	14.42%	45	3.25%	23	11.17%	0.00	0.00	0.00
EW	13.73%	55	-2.97%	13	16.71%	0.01	0.01	0.01

Panel B – OJE Market Timing versus Passive (Sharpe Ratios)

	VW		EW	
	OJE	PS	OJE	PS
Mean	8.82%	12.68%	12.06%	17.16%
Std Dev	15.85%	16.84%	20.83%	25.52%
Sharpe Ratio	0.280	0.493	0.368	0.501

Panel C - OJE Market Timing versus Passive (Jensen's Alpha)

		VW	EW
alpha	coefficient	-0.043	0.013
	t-statistic	-1.32	0.31
Market	coefficient	0.678***	0.685***
	t-statistic	7.85	6.44
SMB	coefficient	-0.283***	0.454***
	t-statistic	-3.22	3.02
HML	coefficient	0.121	0.054
	t-statistic	0.90	0.29
MOM	coefficient	0.288	-0.102
	t-statistic	1.10	-0.40
ADJ R^2		0.430	0.470

Panel D - OJE Market Timing versus Passive (MPPM)

	VW		EW	
	OJE	PS	OJE	PS
$\rho = 2$	6.20%	10.01%	8.04%	11.54%
$\rho = 3$	4.65%	8.52%	5.84%	8.62%
$\rho = 4$	2.99%	6.99%	3.58%	5.73%

EW and VW are the CRSP equally and value-weighted indices respectively. Our risk-free rate data is the Total Return Treasury Bill series from Global Financial Data. All data relate to the 1940 – 2007 period. In Panel A we calculate the 11-month return from February to December following positive (negative) January returns and then calculate the spread as the difference in 11-month returns. The statistical significance of the spread is determined using OLS t-statistics (OLS), Newey West (1987) t-statistics (NW) and bootstrapped t-statistics (BS), which are calculated using the Cooper, McConnell, and Ovtchinnikov (2006) method. Panels B and C contain Sharpe Ratio and Jensen's Alpha results respectively for the Other January Effect (OJE) and passive (PS) strategy (Panel C t-statistics are derived from the Newey West (1987) methodology). Equivalent results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results are provided in Panel D. *** denotes statistical significance at the 1% level.

Table 2. Example of the Disparity Between Spread Results and Investor Experience

Panel A - Returns by Year

	VW			EW		
Year	Jan	Feb-Dec	OJE	Jan	Feb-Dec	OJE
1998	0.45%	21.73%	21.73%	1.54%	-4.38%	-4.38%
1999	3.83%	20.63%	20.63%	6.48%	25.60%	25.60%
2000	-3.98%	-7.36%	7.36%	5.06%	-15.42%	-15.42%
2001	3.95%	-14.64%	-14.64%	22.50%	-0.34%	-0.34%
2002	-1.61%	-19.55%	19.55%	1.82%	-12.50%	-12.50%
2003	-2.34%	36.34%	-36.34%	0.61%	71.55%	71.55%
2004	2.31%	10.45%	10.45%	6.58%	14.23%	14.23%
2005	-2.66%	10.25%	-10.25%	-2.93%	8.77%	-8.77%
2006	4.01%	11.74%	11.74%	7.64%	10.36%	10.36%
2007	1.94%	5.25%	5.25%	2.23%	-5.39%	-5.39%

Panel B - Spread versus Average 11- Month Trading Rule Returns

Positive Jan Average 11-Month Return	9.20%		9.30%	
Negative Jan Average 11-Month Return	4.92%		8.77%	
Spread	4.28%		0.53%	
Average OJE Returns		3.55%		7.49%

EW and VW are the CRSP equally and value-weighted indices respectively. Panel A contains the January and February – December market returns, and the returns to the OJE which involves taking a long (short) position in the market from February – December if January returns are positive (negative). Panel B contains the average 11-month returns following positive and negative Januaries and the spread between these two averages. The average return to the OJE is also presented.

Table 3. OJE Performance in Different Size Portfolios

Panel A – OJE Basic Test

	Positive Jan Return	N	Negative Jan Return	N	Spread	P-Value OLS	P-Value NW	P-Value BS
Quintile 1	13.73%	60	-8.11%	8	21.84%	0.04	0.00	0.04
Quintile 2	14.34%	48	2.74%	20	11.61%	0.04	0.03	0.03
Quintile 3	14.57%	46	4.59%	22	9.98%	0.04	0.04	0.02
Quintile 4	14.86%	45	5.21%	23	9.65%	0.02	0.02	0.01
Quintile 5	14.11%	44	4.47%	24	9.65%	0.01	0.01	0.01

Panel B - OJE Market Timing versus Passive (Sharpe Ratios)

	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	OJE	PS	OJE	PS	OJE	PS	OJE	PS	OJE	PS
Mean	13.45%	21.82%	9.70%	16.35%	8.74%	15.36%	8.44%	14.56%	7.93%	12.78%
Std Dev	27.69%	36.32%	21.79%	25.34%	20.03%	21.91%	18.75%	19.64%	16.18%	16.68%
Sharpe	0.328	0.480	0.244	0.472	0.218	0.501	0.216	0.518	0.219	0.503

Panel C - OJE Market Timing versus Passive (Jensen's Alpha)

		Q1	Q2	Q3	Q4	Q5
alpha	coefficient	-0.021	-0.085	-0.066	-0.054	-0.044
	t-statistic	-0.54	-1.62	-1.54	-1.31	-1.37
Market	coefficient	0.788***	0.519***	0.592***	0.639***	0.630***
	t-statistic	6.78	3.39	4.08	5.80	6.45
SMB	coefficient	1.034***	0.319*	-0.023	-0.179	-0.184
	t-statistic	5.74	1.72	-0.13	-1.31	-1.29
HML	coefficient	0.219	0.479**	0.299	0.334	0.125
	t-statistic	0.89	2.37	1.58	1.61	0.90
MOM	coefficient	0.001	0.507	0.384	0.227	0.221
	t-statistic	0.00	1.40	1.17	0.71	0.86
ADJ R^2		0.621	0.284	0.227	0.276	0.344

Panel D - OJE Market Timing versus Passive (MPPM)

	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	OJE	PS	OJE	PS	OJE	PS	OJE	PS	OJE	PS
$\rho = 2$	7.13%	12.23%	4.32%	10.79%	4.22%	10.97%	4.56%	11.08%	5.23%	10.20%
$\rho = 3$	4.09%	7.86%	0.62%	7.91%	1.32%	8.58%	2.12%	9.21%	3.67%	8.79%
$\rho = 4$	1.20%	3.84%	-4.03%	5.05%	-2.01%	6.14%	-0.65%	7.29%	2.04%	7.34%

Size quintile data are sourced from Ken French's website for the 1940 – 2007 period. In Panel A we report the 11-month return from February to December following positive (negative) January returns and then calculate the spread as the difference in 11-month returns. The statistical significance of the spread is determined using OLS t-statistics (OLS), Newey West (1987) t-statistics (NW) and bootstrapped t-statistics (BS), which are calculated using the Cooper, McConnell, and Ovtchinnikov (2006) method. Panels B and C contain Sharpe Ratio and Jensen's Alpha results respectively for the Other January Effect (OJE) and passive (PS) strategy (Panel C t-statistics are derived from the Newey West (1987) methodology). Equivalent results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results are provided in Panel D. *, **, and *** denotes statistical significance at the 10%, 5%, and 1% levels respectively.

Table 4. Example of Disparity Between the Performance of the OJE in Individual Stocks and Indices

	Scenario A OJE works for ALL stocks		Scenario B OJE works for NO stocks		Scenario C OJE works for 50% of stocks	
	Jan	Feb - Dec	Jan	Feb - Dec	Jan	Feb – Dec
Stock 1	4%	25%	4%	-3%	4%	25%
Stock 2	3%	20%	3%	-2%	3%	-2%
Stock 3	-1%	-3%	-1%	25%	-1%	-3%
Stock 4	-2%	-2%	-2%	20%	-2%	20%
Equally Weighted Market Index	1%	10%	1%	10%	1%	10%

This table contains a stylized example of how the OJE can perform quite differently at the individual stock level (i.e. be 100% accurate, 50% accurate or 100% inaccurate) and yet still produce the same result at the market index level (i.e. being accurate for any given year).

Table 5. Individual Stock Analysis

	All Years	Years with a Positive January Market Return	Years with a Negative January Market Return
N	68	55	13
Panel A: Mean Analysis			
Mean Positive January Stocks 11-Month Return	11.25%	14.50%	-2.46%
Mean Negative January Stocks 11-Month Return	10.15%	13.13%	-2.46%
Difference	1.10%	1.37%	-0.01%
p-value	0.752	0.719	0.999
Panel B: Median Analysis			
Median Positive January Stocks 11-Month Return	9.99%	13.85%	-7.29%
Median Negative January Stocks 11-Month Return	9.98%	12.61%	-5.92%
Difference	0.01%	1.24%	-1.37%
p-value	0.806	0.751	0.898

All data are sourced from CSRP for the 1940-2007 period. We include all stocks in the CRSP database. P-values are generated using the basic t-test and the non-parametric Kruskal-Wallis test.

Table 6. One-Month Formation Period 11-Month Holding Period Momentum Profits

	Winner Return	Loser Return	Winner – Loser Return	t-statistic
All Months	15.80%	13.41%	2.40%***	4.85
January	9.20%	6.90%	2.30%	1.27
February	15.10%	11.70%	3.50%*	1.81
March	16.00%	13.40%	2.60%*	1.73
April	17.80%	11.80%	6.00%***	4.17
May	16.20%	12.50%	3.70%***	2.87
June	16.80%	14.80%	2.00%	1.17
July	19.10%	13.10%	6.00%***	3.60
August	16.00%	14.30%	1.70%	1.09
September	17.70%	14.40%	3.30%*	1.92
October	17.10%	16.20%	0.90%	0.44
November	15.40%	14.00%	1.40%	0.74
December	13.30%	17.60%	-4.40%**	-2.29

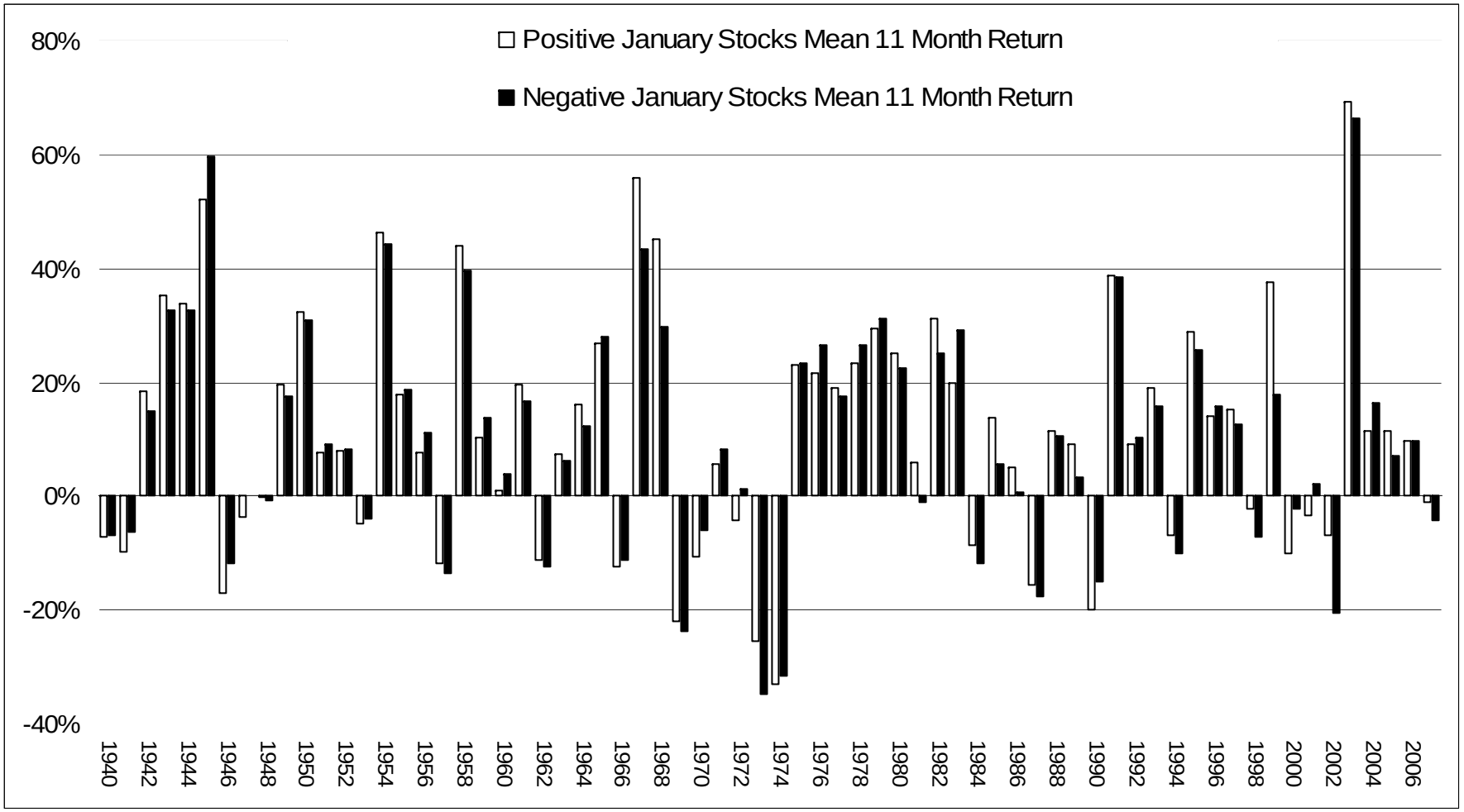
All data are sourced from CSRP for the 1940-2007 period. We set-up our momentum test based on Jegadeesh and Titman (1993). However, we consider a one month formation period and an 11-month holding period. The results relate to this strategy applied across all months in our sample and for each month used as the formation period. For instance, the January results pertain to the strategy of using January as the formation month and the February – December period as the holding period. We report average 11-month winner and loser returns and the difference between these returns. *, **, and *** denotes statistical significance at the 10%, 5%, and 1% levels respectively.

Table 7. OJE Performance in International Indices

	Spread	OJE Return	PS Return	OJE Sharpe	PS Sharpe	Jensen's Alpha	OJE MPPM	PS MPPM
Australia	5.85%	5.51%	13.31%	-0.026	0.295	-0.046	-4.17%	4.89%
Austria	9.99%	4.64%	16.27%	-0.038	0.276	-0.100**	-52.41%	6.62%
Belgium	-1.45%	2.94%	16.68%	-0.111	0.421	0.003	-43.20%	9.50%
Canada	0.87%	3.19%	13.09%	-0.136	0.358	-0.106***	-3.30%	7.91%
Denmark	4.58%	6.65%	17.87%	0.018	0.421	-0.060	-8.28%	8.92%
France	-9.95%	0.31%	15.35%	-0.189	0.335	-0.099***	-34.07%	6.24%
Germany	3.90%	3.95%	15.18%	-0.068	0.306	-0.076*	-13.79%	6.07%
Hong Kong	1.38%	7.49%	25.60%	0.029	0.421	-0.006	-18.42%	-0.40%
Italy	12.01%	8.16%	12.69%	0.064	0.182	-0.062*	-2.14%	0.85%
Japan	23.14%*	12.82%	15.52%	0.210	0.274	-0.004	0.41%	3.08%
Netherlands	9.16%*	6.57%	16.00%	0.021	0.521	-0.038	-0.62%	11.10%
Norway	12.78%	10.56%	20.22%	0.108	0.321	-0.093**	-7.69%	3.31%
Singapore	0.72%	7.77%	20.05%	0.036	0.296	-0.146***	-11.70%	0.57%
Spain	22.64%**	13.02%	15.36%	0.264	0.298	-0.007	4.77%	4.11%
Sweden	-2.57%	5.85%	18.62%	-0.009	0.444	-0.063	-13.02%	8.41%
Switzerland	-0.39%	1.04%	15.04%	-0.190	0.370	-0.101***	-9.13%	8.70%
U.K.	10.57%*	4.51%	15.24%	-0.067	0.330	-0.042	-3.10%	4.67%
U.S.	11.37%**	8.41%	12.04%	0.146	0.351	-0.008	4.58%	7.74%
World	5.58%	6.70%	12.10%	0.034	0.356	-0.049*	1.82%	7.81%
World ex US	6.74%	6.70%	13.50%	0.027	0.354	-0.052*	-0.60%	7.65%

All data are MSCI total return data for the 1970 – 2007 period in USD. These data are sourced from Datastream. Spread is the difference between mean 11-month returns following positive Januaries and negative Januaries. OJE Return and PS Return are the mean returns per annum to an investor following the OJE and passive strategy. OJE Sharpe and PS Sharpe are the equivalent Sharpe Ratios. Jensen's Alphas are calculated based on the CAPM. OJE MPPM and PS MPPM are the results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) based on $\rho = 3$. *, **, and *** denotes statistical significance at the 10%, 5%, and 1% levels respectively.

Figure 1. 11-Month Returns for Stocks with Positive and Negative January Returns



We use all stocks in CRSP for the 1940-2007 period. We graph the mean 11-month returns for stocks that had a positive return in January (light colored bars) and the mean 11-month returns for stocks that had a negative return in January (dark colored bars).

Appendix 1. Spurious Regression Adjustment Results

		N	α	$t(\alpha)$	β	$t(\beta)$	$\overline{R}^2$
EW		68	-0.0297	-0.52	0.1671	2.64	8.18%
	Spurious regression bias		0.0346 / 0.1812	0.91 / 5.04	-0.1033 / 0.1021	-1.99 / 1.98	
VW		68	0.0325	1.15	0.1117	3.23	12.31%
	Spurious regression bias		0.0590 / 0.1588	2.28 / 6.63	-0.0691 / 0.0696	-1.99 / 2.01	

All data are sourced from CSRP for the 1940-2007 period. This table contains parameter estimates and t-statistics and ranges for these variables within which the null hypothesis of spurious regression bias due to dummy variable persistence cannot be discounted. These are determined based on the Powell, Shi, Smith, and Whaley (2007) approach.

Appendix 2. 12-Month Holding Period Results

Panel A – OJE Basic Test

	Positive Jan Return	N	Negative Jan Return	N	Spread	P-Value OLS	P-Value NW	P-Value BS
VW	16.30%	45	5.04%	23	11.26%	0.00	0.00	0.00
EW	19.57%	55	3.95%	13	15.62%	0.03	0.03	0.02

Panel B - OJE Market Timing versus Passive (Sharpe Ratios)

	VW		EW	
	OJE	PS	OJE	PS
Mean	9.21%	12.68%	15.02%	17.16%
Std Dev	17.40%	16.84%	23.50%	25.52%
Sharpe Ratio	0.277	0.493	0.453	0.501

Panel C - OJE Market Timing versus Passive (Jensen's Alpha)

		VW	EW
alpha	coefficient	-0.028	0.056
	t-statistic	-0.75	1.56
Market	coefficient	0.694***	0.758***
	t-statistic	7.14	7.00
SMB	coefficient	-0.280***	0.605***
	t-statistic	-2.69	4.63
HML	coefficient	0.132	-0.001
	t-statistic	0.84	0.00
MOM	coefficient	0.162	-0.295
	t-statistic	0.55	-1.31
ADJ R^2		0.350	0.547

Panel D - OJE Market Timing versus Passive (MPPM)

	VW		EW	
	OJE	PS	OJE	PS
$\rho = 2$	6.14%	10.01%	10.20%	11.54%
$\rho = 3$	4.39%	8.52%	7.62%	8.62%
$\rho = 4$	2.55%	6.99%	4.96%	5.73%

EW and VW are the CRSP equally and value-weighted indices respectively. Our risk-free rate data is the Total Return Treasury Bill series from Global Financial Data. All data relate to the 1940 – 2007 period. In Panel A we calculate the 12-month return from February to January following positive (negative) January returns and then calculate the spread as the difference in 12-month returns. The statistical significance of the spread is determined using OLS t-statistics (OLS), Newey West (1987) t-statistics (NW) and bootstrapped t-statistics (BS), which are calculated using the Cooper, McConnell, and Ovtchinnikov (2006) method. Panels B and C contain Sharpe Ratio and Jensen's Alpha results respectively for the Other January Effect (OJE) and passive (PS) strategy (Panel C t-statistics are derived from the Newey West (1987) methodology). Equivalent results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results are provided in Panel D. *** denotes statistical significance at the 1% level.

Appendix 3. 11-Month Strategy Adjusted Benchmark Results

Panel A - OJE Market Timing versus Passive (Sharpe Ratios)

	VW		EW	
	OJE	PS	OJE	PS
Mean	9.21%	10.64%	15.02%	10.54%
Std Dev	17.40%	14.43%	23.50%	21.42%
Sharpe Ratio	0.277	0.434	0.453	0.287

Panel B - OJE Market Timing versus Passive (Jensen's Alpha)

		VW	EW
alpha	coefficient	-0.036	0.037
	t-statistic	-1.21	1.27
Market	coefficient	0.703***	0.761***
	t-statistic	6.15	6.80
SMB	coefficient	-0.323***	0.578***
	t-statistic	-2.40	3.38
HML	coefficient	0.063	0.057
	t-statistic	0.56	0.34
MOM	coefficient	0.259	-0.146
	t-statistic	1.10	-0.80
ADJ R^2		0.323	0.481

Panel C - OJE Market Timing versus Passive (MPPM)

	VW		EW	
	OJE	PS	OJE	PS
$\rho = 2$	6.14%	8.61%	10.20%	6.28%
$\rho = 3$	4.39%	7.45%	7.62%	4.00%
$\rho = 4$	2.55%	6.22%	4.96%	1.69%

EW and VW are the CRSP equally and value-weighted indices respectively. Our risk-free rate data is the Total Return Treasury Bill series from Global Financial Data. All data relate to the 1940 – 2007 period. Our benchmark is the returns to a long equity market position for each February to December period. Panels B and C contain Sharpe Ratio and Jensen's Alpha results respectively for the Other January Effect (OJE) and passive (PS) strategy (Panel C t-statistics are derived from the Newey West (1987) methodology). Equivalent results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results are provided in Panel D. *** denotes statistical significance at the 1% level.

Appendix 4. Always Long in January and OJE Strategy for February – December Results

Panel A – OJE Basic Test

	Positive Jan		Negative Jan		Spread	P-Value	P-Value	P-Value
	Return	N	Return	N		OLS	NW	BS
VW	19.25%	45	-0.18%	23	19.43%	0.00	0.00	0.00
EW	22.41%	55	-5.07%	13	27.48%	0.00	0.00	0.00

Panel B - OJE Market Timing versus Passive (Sharpe Ratios)

	VW		EW	
	OJE	PS	OJE	PS
Mean	10.57%	12.68%	18.27%	17.16%
Std Dev	18.74%	16.84%	24.61%	25.52%
Sharpe Ratio	0.330	0.493	0.564	0.501

Panel C - OJE Market Timing versus Passive (Jensen's Alpha)

		VW	EW
alpha	coefficient	-0.034	0.064
	t-statistic	-0.95	1.93*
Market	coefficient	0.842	0.820
	t-statistic	8.95***	8.09***
SMB	coefficient	-0.250	0.702
	t-statistic	-2.46***	4.50***
HML	coefficient	0.084	0.083
	t-statistic	0.54	0.43
MOM	coefficient	0.252	-0.200
	t-statistic	0.85	-0.92
ADJ R^2		0.482	0.604

Panel D - OJE Market Timing versus Passive (MPPM)

	VW		EW	
	OJE	PS	OJE	PS
$\rho = 2$	7.02%	10.01%	13.07%	11.54%
$\rho = 3$	4.97%	8.52%	10.35%	8.62%
$\rho = 4$	2.82%	6.99%	7.63%	5.73%

EW and VW are the CRSP equally and value-weighted indices respectively. Our risk-free rate data is the Total Return Treasury Bill series from Global Financial Data. All data relate to the 1940 – 2007 period. In Panel A we calculate the 12-month January to December return as the January return plus (minus) the February – December return following positive (negative) Januaries and then calculate the spread as the difference in 12-month returns. The statistical significance of the spread is determined using OLS t-statistics (OLS), Newey West (1987) t-statistics (NW) and bootstrapped t-statistics (BS), which are calculated using the Cooper, McConnell, and Ovtchinnikov (2006) method. Panels B and C contain Sharpe Ratio and Jensen's Alpha results respectively for the Other January Effect (OJE) and passive (PS) strategy (Panel C t-statistics are derived from the Newey West (1987) methodology). Equivalent results for the Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results are provided in Panel D. ***, *denotes statistical significance at the 1% and 10% levels respectively.

Appendix 5. Sub-Period Analysis

Panel A – OJE Basic Test

	Positive Jan		Negative Jan		Spread	P-Value	P-Value	P-Value
	Return	N	Return	N		OLS	NW	BS
EW 1926-1939	6.05%	12	39.46%	2	-33.41%	0.41	0.19	0.83
VW 1926-1939	0.63%	10	22.59%	4	-21.96%	0.28	0.25	0.90
EW 1926-2007	12.36%	67	2.68%	15	9.67%	0.23	0.16	0.16
VW 1926-2007	11.92%	55	6.12%	27	5.80%	0.19	0.23	0.17

Panel B - OJE Market Timing versus Passive (Sharpe Ratios)

	EW 1926-1939		VW 1926-1939		EW 1926-2007		VW 1926-2007	
	OJE	PS	OJE	PS	OJE	PS	OJE	PS
Mean	-0.32%	16.89%	-5.88%	8.58%	9.94%	17.11%	6.31%	11.98%
Std Dev	51.46%	50.46%	33.28%	31.79%	28.39%	30.78%	20.41%	19.98%
Sharpe Ratio	-0.035	0.305	-0.221	0.223	0.213	0.430	0.119	0.405

Panel C - OJE Market Timing versus Passive (MPPM)

	EW 1926-1939		VW 1926-1939		EW 1926-2007		VW 1926-2007	
	OJE	PS	OJE	PS	OJE	PS	OJE	PS
$\rho = 2$	-22.19%	-2.50%	-16.84%	-1.26%	1.46%	8.92%	1.51%	7.95%
$\rho = 3$	-30.89%	-10.77%	-21.66%	-6.33%	-4.15%	4.58%	-1.46%	5.61%
$\rho = 4$	-37.62%	-17.35%	-25.69%	-11.07%	-10.87%	0.21%	-4.77%	3.08%

EW and VW are the CRSP equally and value-weighted indices respectively. In Panel A we calculate the 11-month return from February to December following positive (negative) January returns and then calculate the spread as the difference in 11-month returns. The statistical significance of the spread is determined using OLS, Newey West (1987, and bootstrapped t-statistics (BS). Panels B and C contain Sharpe Ratio and Ingersoll, Spiegel, Goetzmann, and Welch (2007) Manipulation-Proof Performance Measure (MPPM) results respectively for the Other January Effect trading rule (OJE) and passive (PS) strategy.