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## Halloween or January? Yet another puzzle ☆

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### Abstract

Recent works suggest a potentially exploitable effect in US markets, the ‘Halloween Indicator’. This suggests that the greater part of changes in equity markets arises over the November–April period, with little change over the summer months, simultaneous with no evident changes in the risk profiles of the two six-month periods. We re-examine this and find contradictory evidence. Over the 1926–2002 period we find rather that the effect demonstrated may well be a reflection of the well-known January anomaly. Our conclusion therefore is that the jury remains out on the existence of a semi-annual seasonality.

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### Introduction

One of the more startling claims regarding seasonal patterns are made in a recent paper by Bouman and Jacobsen (2002). They claim that they have discovered a simple strategy that will outperform the stock market while, at the same time, halving the risk. In their paper, this strategy works in 36 out the 37 equity markets analysed; it works in large established markets such as the US and in small emerging markets such as Indonesia; it works over the immediate ; it works after full allowance for trading expenses and taxes and it appears to be present over long runs of time. It works especially well in Europe. The excess risk-adjusted profit of their proposed strategy is demonstrated to be not only economically significant but also statistically significant.

The trading strategy is based on the old market adage; ‘Sell in May and go away but buy back on St Leger Day’, which is one of the mantras of the stock market of uncertain origin.<sup>2</sup> This adage encapsulates the simple trading rule: sell on 1st May but buy back into the market in autumn sometime. Bouman and Jacobsen show that it matters little whether one buys back in September or October, and adapt the rule so that one buys back at Halloween. The resulting rule is then simply to be in cash for half the year (May to October) and in equities for the other half (November to April). The positive returns delivered by stock

markets, they contend, tend to be concentrated in the November–April six months of the year, with the other half of the year delivering poor, often negative, returns.

However, the profitability of such a simple strategy would pose a very strong challenge to the Efficient Market Hypothesis. This paper attempts to re-examine this trading strategy using stock level data for the US. If the suggested trading strategy is robust, we should observe profitable returns in this data set. This paper is structured as follows: Section 2 reviews some of the vast literature on seasonal patterns, outlining inter alia the argument of Bouman and Jacobsen (2002), Section 3 describes the data set, and Section 4 provides results. A brief conclusion emerges in Section 5.

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## Section snippets

### A brief review of studies of monthly seasonality in equity markets

A significant body of literature already exists to suggest that, especially for smaller capitalization stocks, returns vary significantly across the months of the year. January, especially the early part of January, typically commands the highest returns of a year. Early evidence on the tendency of January returns to exceed those of other months comes from Wachtel (1942), followed by Officer, 1975, Rozeff and Kinney, 1976 after a long hiatus. Prior literature shows that higher returns in...

### Data and methodology

We investigate the ‘Halloween Indicator’ using the CRSP dataset. There are two reasons why we use the US stock data. First, we contend that American researchers and traders are relatively unfamiliar with the Halloween indicator compared to European researchers. This data set, although having been extremely well-mined, has not been previously investigated for this phenomenon. Use of a novel and reasonably independent data set can overcome the charge of data mining as pointed out by Lakonishok...

### Results

Table 2 presents some summary statistics. A number of points are evident. From analysis of the first two moments, there is some support for the Bauman and Jacobsen contention. Average returns over the winter months exceed those for the summer months in both the Value and Equal weighted CRSP indices, and in all deciles. The magnitude of the excess return declines monotonically as we increase stock size; there is no consistent pattern in the changes in standard deviation, but again, in all cases, ...

### Conclusion

Our analysis of the US market, using CRSP data, indicates that the Halloween indicator of Bouman and Jacobsen (2002) may well not exist. The evidence over the long term and across deciles is that the Halloween indicator, where it does appear, may be a reflection of the January effect, itself generally declining both in significance and in absolute terms. Contrary to the results of Bouman and Jacobsen (2002), a trading strategy based on the purported indicator is not obviously superior to a...

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## Eastern Halloween effect: A stochastic dominance approach

2020, Journal of International Financial Markets, Institutions and Money

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## Halloween Effect in developed stock markets: A historical perspective

2020, International Economics

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...Lucey and Zhao (2008) instead found that what was seen as the Halloween effect in the US, was a reflection of the January effect. Therefore, Lucey & Zhao (2008) concluded that the existence of the Halloween effect in the US was uncertain. More recently, Jacobsen and Zhang (2018) conducted a worldwide study, including the US, of the Halloween effect and found that the Halloween effect was robust....

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## The “Sell in May” effect: A review and new empirical evidence

2018, North American Journal of Economics and Finance

*Citation Excerpt :*

...Haggard and Witte (2010) revisit the findings of Maberly and Pierce (2004) and Lucey and Zhao (2008). To improve the power of statistical tests, they extend the tested time interval of Lucey and Zhao (2008) to 2008 and enlarge their sub-periods by splitting the sample period into three longer instead of four shorter sub-periods. In tests for the value-weighted and equal-weighted CRSP indices, they cannot find a significant SIM effect for the 1926 to 1953 period....

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