The January Effect Revisited

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In 1998, it was suggested in this publication that publicity was hurting the January effect to the point that it was all but nonexistent, except for the smallest of listed companies. It was predicted that the effect would continue for the smallest of the small (that is, micro-cap stocks) because the costs of exploiting it were too high.[1] Six years have passed and it seems like a good time to revisit the questions posed and the predictions made.

To recap, the January effect is the tendency for stocks, particularly those of small companies, to do exceptionally well during the month of January. At least ten different reasons have been given for why this might occur, although our reading of the literature suggests that researchers are converging on the tax-loss selling, window dressing or performance hedging hypotheses as the leading candidates.

The tax-loss selling hypothesis is based on the belief that year-end tax-loss selling causes stock prices to be depressed in December and then bounce back in January. Because only individuals sell stocks for tax purposes, the stocks most affected are the smaller issues that institutions avoid. Moreover, smaller issues are more volatile and thus more likely to have a large loss (or large gain), so that they are more likely to be sold for tax advantage.

The window dressing hypothesis posits that portfolio managers reconfigure their portfolios in anticipation of year-end reporting. They do so by selling off stocks that have done poorly and buying stocks that either have done well, or have names familiar to their clients. Once January rolls around, the managers reinvest in the securities they believe will outperform over the coming year. These are often smaller or more obscure names.

According to the performance hedging hypothesis, portfolio managers are often compensated based on their returns over and above a specified benchmark. In the event that their returns exceed that of the benchmark at some point in the year, this hypothesis suggests that they'll reconfigure their portfolio to become more benchmark-like for the balance of the year. This typically involves selling the riskier securities in their portfolio, which are more likely to be smaller stocks. Once the calendar year ends and their bonus in collected, they reinvest in the riskier small stocks that they believe will outperform their benchmark.

Testing the Hypothesis

Consistent with earlier work on the subject, we use "decile" data from the Center for Research in Security Prices to test for the presence of the effect. To create the deciles, all stocks are ranked at the end of each calendar year by their market capitalization. The largest ten percent are placed into Decile 1, the next ten percent are placed in Decile 2, and so on. The companies are re-ranked periodically and new deciles are formed.

To determine if there was anything special about January, the following linear regression was performed.

$$r_{it} = \alpha_i + \beta_i J_t + \varepsilon_t \quad (1)$$

where r_{it} is the total return to decile i in month t, J_t is a dummy variable that takes on the value of one if month t is a January, and zero otherwise.

If January is irrelevant—that is, the returns to decile i are independent of whether or not month t is a January—then β_i should be equal to zero, or if not exactly zero, close enough so that it is statistically indistinguishable from zero.

The parameters in equation 1 were estimated using data covering the period April 1997–December 2003. The

start date was selected since the previous study ended at March 1997. The results are reported in Table 1 on the next page.

TABLE 1

Betas on January Dummy Variable, April 1997–December 2003

Decile	Beta
1	-0.61
2	-1.77
3	-1.85
4	-1.93
5	-1.36
6	-0.50
7	-0.50
8	0.97
9	3.64
10	7.43*

*Denotes a coefficient that is statistically significant at the five percent level.

Table 1 shows that the only decile to exhibit a statistically significant return during the month of January was Decile 10. The conclusion is that, as expected, the January effect wasn't around over this period except for the smallest stocks.

Equation 1 is a simple characterization of the return-generating process in the market. A more robust characterization would be to model the return on decile i in month t as a function of a broader set of factors that have been shown to explain the distribution of security returns. We use a set of risk and style factors in the spirit of Fama-French (1992)[2] and Fama-French (1993)[3] as well as the January dummy variable.[4]

The results provided in Table 2 are interesting in that the January dummy variable is significant in Deciles 2–7 and 10, but in Deciles 2–7 the sign is wrong—that is, after controlling for the risk and style, the return in January is actually lower than would be expected in those deciles. On the other hand, Decile 10 still does incredibly well in January. An important caveat is that running a regression of this sort when there are only five Januarys in the sample is a bit dicey. In fact, if we look at just the raw returns to Decile 10, the average is +8.52 percent during January. However, if we remove the +30.88 percent result for January 2001, that average drops to +4.05 percent. Nevertheless, we find it intriguing that the exceptional January performance in Decile 10 still stands even after dumping five additional explanatory variables into the mix.

Lessons Learned

1. The January effect remains either dead or dormant for all but the smallest firms.
2. The January effect in these stocks survives even after we account for a large list of risk factors.
3. While we haven't figured out how to effectively exploit this little anomaly yet, there still appears to be time.

Endnotes

1. Mark W. Riepe, "Is Publicity Killing the January Effect?" *Journal of Financial Planning*, February 1998, pp. 64–70.
2. Eugene F. Fama and Kenneth R. French, "The Cross-Section of Expected Stock Returns," *Journal of Finance*, June 1992, pp. 427–465.
3. Eugene F. Fama and Kenneth R. French, "Common Risk Factors in the Returns on Stocks and Bonds," Journal of Financial Economics, February 1993, pp. 3–56.

4. Fama and French demonstrate the poor explanatory power of the standard market model that uses only the equity risk premium (for example, the capital asset pricing model). By adding two other risk factors, the small-cap stock premium and the value premium, the ability to explain the distribution of stock returns is improved. The small-cap stock premium is the average compensation received by investors for holding more risky small-cap stocks over their large-cap brethren. The value premium is the average compensation received by investors for holding potentially riskier value stocks over growth stocks. Two fixed-income risk factors are included due to Fama and French's belief that the equity and fixed-income markets are integrated. This results in a general asset pricing model for all available securities in the financial markets.

   Due to inadequate availability of data, we used similar but different benchmarks to capture the same effects. For the small-cap premium, we used the Ibbotson small-cap premium series. For the value premium, we used the geometric difference between the Fama-French Value and Fama-French Growth benchmarks. For the interest rate risk and the default risk factors, we used the Ibbotson horizon and default premium factors. The Ibbotson horizon premium is the average compensation received for long-term government bonds over short-term government bonds. The Ibbotson default factor is the average compensation received for holding long-term corporate bonds over long-term government bonds.

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