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# The declining January effect: evidences from the U.S. equity markets

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**Abstract**

The January effect exhibits a pronounced declining trend for both large and small firm stock indices since 1988 and the effect is disappearing for the Russell indices. The declining trend is also evident in the Dow 30, since 1930. While the trend is upward for the Dow 30 and the S&P 500 for the post-war period through the 1970s, because of the extremely high January returns in 1975 and 1976, the trend lines are flat when these outliers are excluded. The downward trend is more apparent for indices containing small stocks than for indices of large stocks. The January effect is negatively connected to actual and expected real GDP growth, inflation, and return of the year, and it is positively related to volatility. The power ratio method provides a consistent way to reveal the relative contribution of January return in the year. Finding the pattern of changes in the anomaly has implications for investment strategies.


*Keywords:* Declining January effect; Market efficiency

## 1. Introduction

The January effect—or the abnormally large returns on common stocks in most months of January—has been one of the most intriguing issues in financial economics since 1976. Wachtel (1942) provided the first academic reference to a January seasonal in stock returns. Thirty-four years later, Rozeff and Kinney (1976) pointed out that common stock returns in January are significantly larger than those in other months, and that the anomaly is related to small firms. Reinganum (1981), Keim (1983), and Roll (1983) reaffirm that the January effect

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is more pronounced in small firms. If this is the case, the January effect may decline as firms become larger. Kohers and Kohli (1991) provided evidence that the January effect is not related to small firm effect.

There are several explanations for the January effect. Stoll and Whaley (1983) attribute the anomaly to transaction costs. Chang and Pinegar (1989, 1990) and Kramer (1994) suggest seasonality in risk premium or expected returns. Ritter (1988) hypothesizes tax-loss selling effects. Haugen and Lakonishok (1988) suggest window dressing. Ogden (1990) relates the January effect to year-end transactions of cash or liquidity. Kohers and Kohli (1992) and Kramer (1994) connect the anomaly to business cycle, and Ligon (1997) reports that higher January returns relate to higher January trading volume and lower real interest rates.

Existing literature does not consider the dynamics of the effect, as previous researchers report constant coefficients of dummy variables, or average returns of the month, for their relatively short sample periods. And obviously with these methodologies, one type of observations would overweigh the other if the number of years with an abnormal January is greater than the number of years without it, or the effect is extremely strong in certain years. If the January effect exhibits an increasing or declining trend, or is disappearing in certain markets, then the trend may indicate some changes in the factors discussed above or changes in the impacts of these factors on the effect. And there may exist some unidentified factors or new factors that affect the abnormal return in January.

In this study, a power ratio method is developed to calculate the effect in each individual year for sufficiently long time periods, in order to explore the dynamics and trend of the January effect of major U.S. stock indices. The indices include the Dow Jones 30 Industrial Average (DJIA) from 1929, the S&P 500 [based on 90 stocks before March 1, 1957 and on 500 stocks (the S&P 500) thereafter] from 1950, the Russell 1000 from 1993, and the Russell 2000 and 3000 from 1988. All the data is through the year 2000. The S&P 500 and the Russell indices are value weighted. Using value weighted indices makes the effect of large stocks on returns more apparent. The Dow is equally weighted but using it does not overstate the effect of small stocks on returns because there is no small stock in it. The Russell indices are composed of small stocks. Using the indices for the study avoids issues related to portfolio formation, such as size–beta correlation, size–price correlation, and survivorship. The impacts of real GDP growth, inflation, return of the year, and volatility of an index on the January effect are also analyzed. Data on the annual real GDP growth and inflation is from the U.S. Department of Commerce.

## 2. Methodology

An average, or a regression coefficient of a dummy variable, as used in the existing literature, can show the dominant values, but it cannot reveal the dynamics of the January effect over time. To identify any possible trend of the effect, one needs to measure, for each individual year, the return in January relative to the return in the remaining months of the year. It would be difficult to measure the January effect when return in January and return of the year have opposite signs, (i.e., January positive/year negative, January negative/year positive, or when both January and the year are negative). A power ratio method is developed to give a consistent measurement of