The Effect of Market Anomalies on the Inefficiency of Stock Returns

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Abstract: This paper serves the purpose to analyses market anomalies and their agents on returns in the Iranian indexes between 2017 and 2020. Principled patterns in financial market are incompatible to the efficient market hypothesis (EMH), as stock market returns can be done applying these systematic models. Real investors may not be able to achieve the return and profitability due to the scarcity of their financial resources. Accordingly, the study of the role of real investors in the volatility of stock returns is very important. Well timed actions of investors prices of stocks directly adapt to the new information, and give thought to all the available information. So no investor can chastise the market by generating abnormal returns. The model period is 2017 to 2020 to represent the continuity of the monthly result. This scholarship put upon the advantageous sampling procedure, also known as the judgmental sampling technique, of weekly returns from Iranian indexes and major world indexes based on specific criteria. The demodulations offer an abnormal month of the year outcome stand in some Iranian indexes during the research duration. The vehemence of month of the year anomalies lessens with time. The investigation also illustrate that month of the year factors are more unremitting between indexes with smaller market capitalization.

Keywords: Real Investors, Month of the Year Effect, Return, Market Anomalies

1. Introduction

Principled patterns in financial market are incompatible to the efficient market hypothesis (EMH), as stock market returns can be done applying these systematic models [1-30]. These patterns efficacy the efficiency of stock market being about market anomalies [30-43]. Between these systematic patterns, one of the widepropagation anomalies is month effect. Pertaining data on the clause and orientation of a market will be achievable to financiers if the market is impressive [1-3]. Bhuyan (2018) and Chandra (2017) in his book discuss that an efficient market can demonstrate factual stock prices also avouch the validity of the circumstances illustrated. Investigation on the revenue of capital markets is mostly complete [4, 7]. These studies discover the contrary of the notion of affective capital markets in some capital markets, that is when the state of the stock does not identity existing witting. Bodie et al. (2012) in their wittings arranged three cliques of market efficiency based on data containing weak form proficiency, semi-strong form proficiency and permanent form proficiency [5]. A disputation of efficient market examination cannot be separated from a disputation of the individuation of the perversions and burbles associated with the effectual market hypotheses. Deflections and disorderliness’s are called market anomalies. Jiang and autore (2014) and onoh and ndu-okereke, (2016) express that different situations in a capital market will reason impacts that can be looked in the pulsation of stock prices in a capital market [22, 30]. Unpredictable status with instances or tentative outlooks in a capital market are also customarily named market irregularities. In other words, a market anomaly is a proof of an aberration or an antithesis in the capital market hypothesis. One likewise market irregularity is the month of the year effect. correspondent to Jahfer and Inoue (2014) the month of the year result mentions to the case whereby the stock returns in selected months are higher than in other months [21]. The most widepropagation and exciting
demodulation from the above studies of the monthly result anomaly within a year; afterwards, a stock price may growth or diminution from month to month in one interchanging year in a capital market. This treatment is called the month of the year effect. The month of the year effect refers to the discrepancy in monthly returns in each month of the year. Specifically, this study objects to dissociation the phenomenon of a market’s anomalous month of the year outcome on the indexes of Iran indexes.

2. Research Methods

A fund market is a pivotal mean in an economy that renders to outfit funds from citizens to plenteous parts. A company is an opponent that requisites sources and can enhance them through the capital market by marketing its shares to the public or exporting bonds. However, investors are an opponent propagation acquisition, openness and profession; make a phenomenon of a market’s anomalous month of the year effect. The month of the year effect refers to the discrepancy in monthly returns in each month of the year. Afterwards, a stock price may growth demodulation from the above studies of the monthly result anomaly within a year. It is well-thought-of that stock returns in January and April are main and variant from other months of the year yield. This infract the efficient market hypothesis (EMH) partly outstretched by Fama in the 1960s [15]. Sharpe et al. (1999) tongue there are three reasons of the January result, that is tax-loss selling, window dressing and small and beta stocks [35]. Tax-loss selling is selling stocks with a low value with the purpose of diminishing tax debt, while window dressing sells stocks with low value so the year-end portfolio of a company sight good. A small or beta stock is the tropism in January for more small companies to furnish a higher level of return contrasted to large companies. Bekkers and Hodrick, (2017) describe a return as the outcome gained from a finance [3]. The relapse may be for an investment that has happened or expectances that have not occurred yet but are attended to occurred in the days to come. The stock returns for each day can be accounted exploiting the addendum formula [16, 19, 39]:

\[
R_d = \ln \frac{P_d}{P_{d-1}} \times 100
\]

Where \( R_d \) is return of stock on day d, \( P_d \) is the closing price on day d and \( P_{d-1} \) is the closing price on day d–1.

2.1. Data Collection Method

The information analysis contained of many steps, namely numerating each return from January 2017 to 2020 and then segmentation the computed return indexes into months. Moreover, a market dissociation examination eligible anomalous month of the year factors. In this test, the tester examining to analyse the entity of market anomalies about the month of the year result on some Iranian indexes and the world’s major indexes pending the perception period, that is 2017 to 2020. scholar in equivalent studies have used the linear regression test (OLS) and the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) method.

2.2. Simple Linear Regression Analysis

Model was executed by gaining a dummy variable with the regression equation, as showed below:

\[
R_{an}=\beta_0 + \beta_1DJan + \beta_2DFeb + \beta_3DMar + \beta_4DApr + \beta_5DMay + \beta_6DJun + \beta_7DJul + \beta_8DAug + \beta_9DSept + \beta_10DOkt + \beta_11DNov + \varepsilon
\]
Where, $R_m$ is monthly return index in $t$; $\beta$ is regression coefficients for the dummy variable of each month except one; $D$ is dummy for each month except one. Hakim (2014) noticed that, to acquire an estimator with the hoped-for properties, or Best Linear Unbiased Estimator, OLS should meet standard guess. the linear regression model are as follows:

$$E(U_i|X_i) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \ldots + \beta_m X_{im} + \epsilon_i$$

The Assumption of No Serial Correlation $= E(U_i|X_i) = 0$, Assumption’s Homokedastisitas $= E(U_i|X_i - E(U_i|X_i))^2 = \sigma^2$

The Mean Residual $= E(U_i|X_i - E(U_i|X_i)) (U_i|X_i - E(U_i|X_i)) = 0$, $i \neq j$.

3. Results and Discussion

Several of the indexes in the interval 2017 to 2020 show a significant probability value at $\alpha = 4\%$, indicating the existence of a market anomaly month of the year effect. In the period 2017 to 2020, the effect on several indexes is seen regarding March, July, August, September and October. The outcome of this research is the November effect on the NIKKEI 225 index. The month of the year result adumbrations that, per the correct plan of financing with relation to time, money principals, financial solicitors and financiers can obtain benefit of this sample.

### Table 1. The Existence of the Month of the Year Effect from 2017 to 2020.

<table>
<thead>
<tr>
<th>Index</th>
<th>Method</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
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<td>BSNIS27</td>
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<td>0.0068</td>
<td>0.0070</td>
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<td>-0.0039</td>
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<td>0.0080</td>
<td>0.0076</td>
<td>-0.0045</td>
<td>-0.0056</td>
<td>0.0047</td>
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<td>0.0078</td>
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<td>0.0078</td>
<td>0.0013</td>
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### Table 1. Continued.

<table>
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<tr>
<th>Index</th>
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<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
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<th>Nov</th>
<th>Dec</th>
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<td>0.001</td>
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</tbody>
</table>
In the entirely duration and the sub-period of 2017 to 2020, the September result is realized in all Iranian indexes. This remedy that topics are changing Iran’s capital market in this month likely for the Islamic holy day of ‘Eid happened in September in the study period. There is the probability that ‘Eid affected the Iranian capital market in September for the vast feck of the Iranian population is Islamic. thus, this celebration results the Iranian capital market but not the world’s major capital markets in the research conclusion. moreover, in the sub-period 2017 to 2020, the outcome of April on almost all indexes of Iran can be ascribed to the celebration, or birthday, which befalls in April.

4. Conclusions and Recommendations

The main conclusions of the present study can be summarized as follows:

The outcome indicates the phenomenon of the month of the year effect by consuming the GARCH with Iranian indexes in the period 2017 to 2020.

There were no phenomena as to the month of the year and the sub-period effect by using the OLS model.

References


