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Does January Effect Exist in Jordan Pre and Post the 2008 Global Financial Crisis

Ahmad Fares Alqisie[1], Hamdan Moh'd Al- Hiyasat[2] & Belal Rabah Shammout[1]

[1] Department of Finance and Banking Sciences, World Islamic Sciences & Education University, Jordan, Amman

[2] Departments of Accounting, World Islamic Sciences and Education University, Amman, Jordan

Correspondence: Ahmad Fares Alqisie, Department of Finance and Banking Sciences, World Islamic Sciences & Education University, Amman, Jordan. E-mail: Ahmadalqisie@yahoo.com

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Abstract

The aim of this paper lies in investigating the existence of the January effect at the Amman Stock Exchange (ASE) pre and post the 2008 global financial crisis. For this purpose, the monthly returns of all stock prices in (ASE) have been calculated and analyzed for the period January 2000-December, 2018. The said analysis covered three periods as follows: the first one is the whole period; the second period is from January 2000-December 2007, while the third period is from January 2009-December 2018. Regression models with dummy variables and monthly returns of all shares have been used. The results indicated that the January effect exists at (ASE) during the whole period and the period before the global crisis, while the January effect after the global crisis 2008 does not exist at (ASE). Conversely, the results showed the existence of the December effect. Therefore, there is an opportunity for investors at (ASE) to benefit from these findings.

Keywords: efficient market hypothesis, January effect, 2008 global financial crisis, Amman stock exchange

1. Introduction

In 1970, Fama introduced the efficient market hypothesis (EMH), which states that the previous stock prices should not have a predictive power of future stock prices, i.e., the prices of the stock should move in a random manner, which means that the prices of stock in the financial market reflect all relevant information, and in turn no investor can achieve abnormal returns. This hypothesis leads several researchers to prove its absence in different financial markets using the so-called calendar anomalies (days of the week effect; the month of the year effect; January effect; holiday effect … etc). Anomalies allow the investors the opportunity to predict the movement of the stock prices, which in turn they can achieve abnormal returns by taking benefits of the inefficiencies of those stock markets.

January effect refers to the achievement of superior returns in January as compared to the returns of the other months of the year. Therefore, researchers in numerous countries have tested the existence of the January effect on the returns in the emerging and developed financial markets. Some of these studies proved the existence of January effect pre and post the 2008 financial crisis, for example, Mehdian and Perry (2002); Asteriou and Kavetsos (2006); Sun and Tong, 2010; Alrabadi and Al-Qudah (2012); Li and Gong (2015); Sawitri and Astuty (2018). Quite the reverse, other studies results confirmed the absence of this effect pre and post the 2008 financial crisis, such as Hugen and Jorion, 1996; Schwert, 2002; Sonje, V., Alajbeg, D. and Bubas, Z. (2011); Balint and Gica, 2012; El Khoury and Nahas, 2018; Ozturk et al., 2018.

All of the aforesaid studies results are contradictory and inconclusive, which in turn would affect the investor's decisions. These contradictory results are not far from the Amman Stock Exchange (ASE), where few studies have been conducted to examine the existence of the January effect during the last 15 years. Also, the results of these studies found to be conflicting, for example, the result of Maghayereh study (2003) confirms the absence of January effect pre the financial crisis 2008, while results of Alrabadi and Al-Qudah (2012) and Gharaibeh (2017) studies confirmed the existence of January effect pre and during the financial crisis 2008. Besides, the researchers feel that the results of previous studies may be misleading for investors in this market, especially when they build their investment strategies duly.

Consequently, the current study aims to test the existence of the January effect on the (ASE) pre and post the 2008 global financial crisis. Through the results of the current study, the researchers hope to support or reject the previous results of studies in Jordan to advise investors to maintain their current investment strategies or adopt new ones.

2. Literature Review

January effect means that returns achieved during the month is higher than other remaining months in the year; this phenomenon was the first to pay attention to modern finance by Rozeff and Kinney (1976). Yanxiang (2002) stated that Wachtel (1942), who first examined seasonality in the Dow Jones Industrial Average Index during (1927-1942), found that there are frequent bullish tendencies in the whole period from December to January except four years. After Wachtel's article has been done, several researchers have investigated this phenomenon in different countries, where some have found the existence of January effect in some specific time periods in several financial markets, while others reported the absence of this effect. In the current context, few studies have found that January effect exists in several countries: Rozeff and Kinney (1976) found the average return at NYSE from 1904-1974 is the highest in the month of January in comparison with other remaining months in the year. Keim (1983) examined the January effect at NYSE and The AMEX during the period (1963-1979), and showed there is a significant effect of January for small firms rather than large firms. Also, Reinganum (1983), Rogalski and Tinic (1986), Mehdian and Perry (2002) found the existence of January effect in U.S stock markets. In Canada, Berges, MacConnel and Schlarbaum (1984) proved the existence of January effect during the period 1951-1980. In Turkey, Balaban (1995) detected that the effect of the months of the year during 1988-1993, namely: January, June and September which have significant large returns, noting that among these months having the highest returns in January. Li and Gong (2015) gave a shred of evidence that the January effect exists in Japan during the period 1975-2008. In the UK, Mills and Coutts (1995) proved that the January effect is present at the London Stock Exchange during the period 1986-1992. Asteriou and Kavetsos (2006) examined the January effect in Hungary, Czech Republic, Lithuania, Poland, Romania, Russia, Slovakia, and Slovenia during the period 1991-2003. The results show the significant existence of the January effect in Hungary, Poland, and Romania. Alrabadi and Al-Qudah (2012) proved the significant January effect at (ASE) over the period 2002-2011. Gharaibeh (2017) studies the January effect in four Arabic markets (Jordan, Egypt, Lebanon and, Morocco), and revealed that the January effect significantly exists at the Jordanian and Moroccan stock markets over the period 1988-2014. Sahin, Topaloglu and, Ege (2018) examined the January effect in both Istanbul and Bucharest over the period 2000-2014, and their results showed the existence of the January effect in both countries. Besides, Sawitri and Astuty (2018) analyzed the market anomalies and their effects on returns at the Indonesian and significant world indexes during the period 2010-2016, indicating the existence of January effect in some Indonesian indexes during the period 2014-2016. Hug and Hirschey (2019) examined the existence of January effect on the U.S equities by using value-weighted data (1802-2004) and equal-weighted data (1927-2004), where the results of their study proved the consistent existence of January effect in the U.S equity markets.

On the contrary, several studies gave an evidence of the absence of January effect in the stock markets, such as Hugen and Jorion (1996) who found no evidence of January effect at New York Stock Exchange and Yanxiang Gu (2002) who gave an evidence of declining trends of January effect at the USA stock market since 1988. In Jordan, Maghayereh (2003) found no evidence of the January effect at (ASE) during the period 1994-2002. In Malaysia, Chotigeat and Pandey (2005) revealed that the January effect does not exist at the stock market of Malaysia. Lean, Smyth and Wong (2006) suggested that the January effect has largely disappeared from Asian markets. In Egypt, El-Ansary and Hamed (2009) reported the absence of the January effect at the Egyptian stock exchange over the period 2004-2009. In Bangladesh, Ahsan and Sarkar (2013) proved that the January effect does not exist at the Dhaka stock exchange during the period 1987-2012. Perez (2018) investigated the Phenomenon of January effect in 86 countries and concluded that the January effect globally decreases over time and appears to be an inverted January effect in several markets, which means that the returns in January are lower than returns in others months of the year. El Khoury and Nahas (2018) examined the weak form of the efficient market hypothesis in the French market, focusing on the existence of the January effect at the CAC 40 index during the period 2005-2015. They revealed that the January effect does not exist in the French market. Ozturk et al., (2018) tested the existence of days of the week effect, January effect and religious effect in the Turkish market (BIST100 and KAT30 indices) during the period 2011-2017, and indicated that there is no effect of the days of the week, January effect and Ramadan effect on the returns in both indices.

However, studies that examined the existence of January effects pre and post 2008 crisis are as follows: Sonje et al. (2011) concluded that January effect has not been observed pre 2008 crisis in both Croatian and U.S. markets,

while January effect has been observed post-2008 crisis in both countries. Balint and Gica (2012) observed the January effect in the Romanian capital market pre-2008 crisis, but they noticed a declining effect of the January after the crisis. Diacanosu et al. (2012) concluded that the January effect exists at the Bucharest stock Exchange (Romania) pre-2008 crisis, but they found no January effect during the whole period (2000-2011). Avdalovic and Milenkovic (2017) gave a piece of evidence that the January effect does not exist after the global financial crisis in the stock markets of Serbia, Bosnia, Macedonia, Montenegro, Croatia, Romania, and Bulgaria during the period (2008-2014).

More importantly, the phenomenon of the January effect in the stock markets has been attributed to the following suggested explanations (Ahsan & Sarkar, 2013):

i. New information hypothesis: the idea of this hypothesis is that when new information reached the marketplace, the prices of the stock start to change. If the information is positive, this will push the prices to upward, and vice versa, negative information leads the prices to downward (Rozeff & Kinney, 1976).

ii. Tax-loss selling hypothesis: the idea of this hypothesis is that in December which is the end of the tax year in many countries, the investors try to realize capital losses to reduce the tax paid by them through selling out stocks held. Accordingly, this will push the prices to go down, and when the tax year starts in January, the investors start to buy stocks which will push the prices to go upward (Branch, 1977).

iii. Window dressing hypothesis: the idea behind this hypothesis is that in the end of the year (December), fund managers try to manipulate their performance through selling losers stocks from their portfolios to avoid showing losers, but in January, the fund managers start to take reverse action by selling winners stocks and buy small stocks back in the portfolio. The first action of fund managers is to push the prices of stocks to downward, creating low returns in December, while the second action is to push the prices to upward, creating high returns in January (Haugen & Lakonishok, 1988).

iv. Liquidity hypothesis: Ogden (1990) believes the abnormal returns in January occur as cash flows (liquidity) increase because of annual bonuses, extra holiday payments, and holiday gifts flow directly in the stock market by individual investors or through mutual funds and pension funds. He also stated that investment decisions are likely to be made in January, where these decisions will create buying pressure during this month; therefore, the prices of stocks will increase.

3. Hypotheses

According to the objectives of the study, the following hypotheses will be tested:

H01: January effect does not exist at the Amman Stock Exchange during the whole period (January 2000-December 2018).

H02: January effect does not exist at the Amman Stock Exchange pre-financial crisis 2008 (January 2000-December 2007).

H03: January effect does not exist at the Amman Stock Exchange after the 2008 financial crisis (January 2009-December 2018).

4. Data and Methodology

4.1 Data

To examine the hypotheses, the monthly returns (*Rm*) of the Amman Stock Exchange (ASE) index were calculated for the period January 2000 to December 2018 with 19 observations for each month. The index includes all shares listed at (ASE). The data has been collected from the (ASE) website. To examine the existence of January month effect at (ASE) before and after the 2008 financial crisis and avoid the effect of the 2008 crisis year, the whole period has been divided into two periods: the first period starts from January 2000 to December 2007 (8 years) with 8 observations for each month, while the second period starts from January 2009 to December 2018 (10 years) with 10 observations for each month.

4.2 Methodology

The equation number 1 was used to calculate the monthly returns of (ASE) index during the study periods.

$$R_m = (P_t - P_{t-1}) / P_{t-1} \quad \ldots\ldots (1)$$

R_m: Monthly return of the ASE index.

P_t: Closed value of ASE index at time t.

P_{t-1}: Closed value of ASE index at time t-1.

To analyze the existence of the January effect during the whole period of the study and before and after the 2008 global crisis, the following OLS dummy regression equation has been used as follows:

$$Rmt = \beta 1D1t + \beta 2D2t + \beta 3D3t + \beta 4D4t + \ldots\ldots + \beta 12D12t + \delta AR(1) + et \quad \ldots.(2)$$

R_{mt} represents the monthly market return of ASE during the study periods.

Djt represents dummy variables that take value 1 if the month is January, February, March,…, or December respectively, and 0 otherwise.

Bi represents the slope of dummies in the model, and **e_t** represents the error term.

Following Gharaibeh (2017), the AR (1) has been added to the regression model to account for the lagged effect of the market return. To avoid the dummy variable trap, the model has been estimated without the intercept (Gujarati, 2004). Furthermore, Newey-West HAC standard errors and covariance were used with OLS to account for heteroskedasticity and serial correlation in the obtained residuals.

5. Results and Discussion

5.1 Movement of Monthly Returns for All Shares at ASE During the Whole Period.

Figure (1) shows the movement of the monthly returns of ASE during the whole sample period which starts from January 2000 to December 2018, accounting for 228 observations.

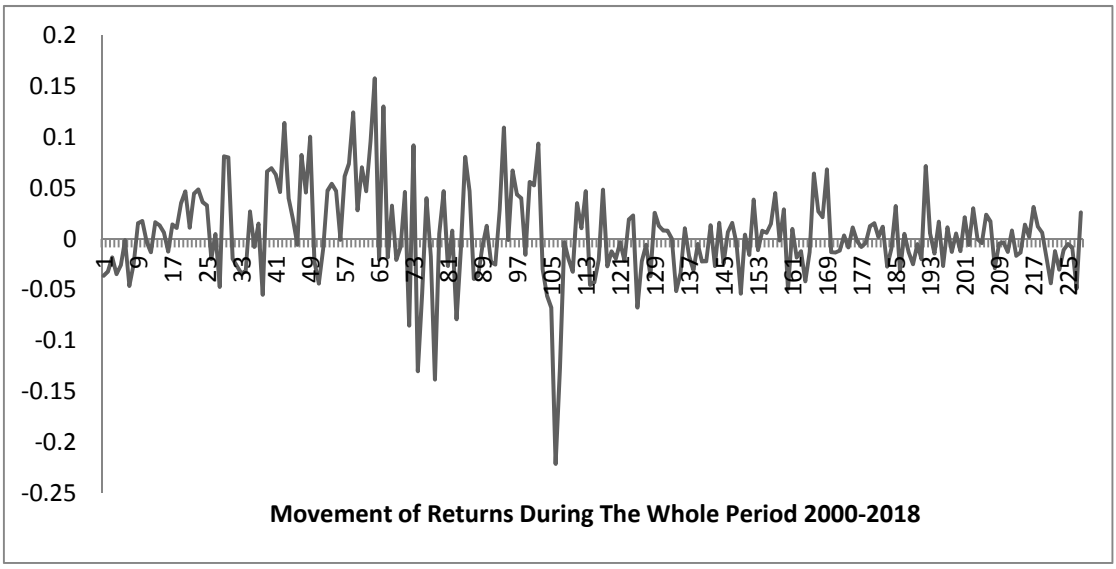

Figure 1. ASE monthly return during 2000- 2018 (%)

5.2 Unit Root Test

Unit root test has been employed to ensure the absence of unit root in the returns for the whole sample period (January 2000 to December 2018). For this purpose, the augmented Dickey-Fuller (ADF) test was used with constant and without constant for several lags. The null hypothesis states that the variable has unit root (Not stationary), while the alternative hypothesis states that the variable has no unit root (stationary). Table 1 shows the results of the ADF.

Table 1. Results of unit root test (Augmented Dickey-Fuller)

lags	*ADF with constant*		*ADF without constant*	
	t. statistic	*Prob.*	*t. statistic*	*Prob.*
1	-7.752591	0.0000***	-7.697511	0.0000***
5	-4.702928	0.0001***	-4.628685	0.0000***
10	-3.972120	0.0019***	-3.872064	0.0001***

*** Significant at 1% level.

According to the results in table 1, the null hypothesis is rejected and accepts the alternative one, which means that the returns during the sample period are stationary.

5.3 Descriptive Statistics

The following table (2) shows the average monthly return, standard deviation, minimum and maximum values during the whole period (January 2000 to December 2018).

Table 2. The average returns monthly during the whole period (January 2000-December 2018).

Month	*Average %*	*Standard deviation %*	*Minimum %*	*Maximum %*
Jan	2.71	4.04	-3.62	10.03
Feb	-1.01-	4.18	-13.03	4.68
Mar	0. 35	3.78	-5.37	9.57
Apr	0. 41	4.97	-4.91	15.78
May	0. 55	4.07	-6.75	8.12
Jun	0.57	5.83	-13.84	13.02
Jul	-0.21-	3.66	-4.64	11.39
Aug	-0.43-	3.14	-5.59	4.69
Sep	-0.11-	3.11	-6.79	6.19
Oct	0.11	6.47	-22.13	10.93
Nov	0.57	5.54	-12.77	12.44
Dec	1.12	3.44	-8.53	7.15

It is observed from a table (2) that the January month has the highest average return 2.71% among the whole months during the whole period of the study with minimum value – 3.62% and maximum value 10.03%. The month of December comes at the second rank with a 1.12% average return, while February month registers the lowest negative average of return -1.01%. We can also observe that the months registering positive average returns during the whole study period are: Jan, Mar, Apr, May, Jun, Oct, Nov, and Dec, while the months Feb, Jul, Aug and Sep have registered negative average returns.

With that, it is concluded that the January month achieved the highest average returns during the whole study period at (ASE). Table (3) shows the average monthly return, standard deviation, minimum and maximum values before the global financial crisis (January 2000 to December 2007).

Table 3. The average returns monthly during the period (January 2000-December 2007).

Month	*Average %*	*Standard deviation %*	*Minimum %*	*Maximum %*
Jan	**4.64**	4.72	-3.62	10.03
Feb	-1.91	5.80	-13.03	4.68
Mar	0. 22	5.38	-5.37	9.57
Apr	1.58	7.00	-4.72	15.78
May	1.68	4.18	-2.59	8.12
Jun	2.43	7.85	-13.84	13.02
Jul	1.17	5.17	-4.64	11.39
Aug	1.10	3.38	-2.69	4.69
Sep	0. 67	3.22	-3.40	6.19
Oct	2.60	4.70	-3.16	10.93
Nov	3.07	6.12	-7.90	12.44
Dec	1.12	3.44	-8.53	6.71

The results in table 3 show that all months before the 2008 global financial crisis have registered positives average returns except month February which has negative average returns. January month has the highest average returns 4.64% among all months with maximum value 10.03% and minimum value -3.62%. Also, Nov month comes at the second-order with average return 3.07% and maximum and minimum value 12.44%, -7.90% respectively, while Feb month has registered the lowest average returns – 1.91% with maximum value of 4.68% and minimum 13.03%. Based on the said, it is concluded that January month has achieved the highest average returns before the 2008 global financial crisis at (ASE).

Table (4) shows the average monthly return, standard deviation, minimum and maximum values after the global financial crisis (January 2009 to December 2018).

Table 4. The average returns monthly during the period (January 2009-December 2018).

Month	*Average %*	*Standard deviation %*	*Minimum %*	*Maximum %*
Jan	1.00	2.93	-2.43	6.83
Feb	-0.80	2.31	-5.14	2.37
Mar	0.64	2.34	-3.38	3.51
Apr	-1.05	2.15	-4.91	2.29
May	-0.84	3.72	-6.75	4.68
Jun	-1.80	1.47	-4.52	1.47
Jul	-1.03	1.65	-4.26	1.65
Aug	-1.13	2.29	-4.17	3.86
Sep	-0.06	2.40	-2.50	4.82
Oct	0.34	2.46	-2.69	6.42
Nov	-0.10	2.52	-4.88	3.01
Dec	**1.55**	2.35	-1.93	7.15

The results in table 3 show that after the 2008 global financial crisis 2008, the months of Jan, Mar, Oct, and Dec have registered positives average returns, while the remaining months have registered negative average returns. In detail, December month has the highest average returns 1.55% among all months with maximum of value 7.15% and minimum value -1.93%. Also, January month comes at the second- order with average return 1% and maximum and minimum value 6.83%, -243% respectively, while Jun month has registered the lowest average returns – 1.80% with maximum value 1.47% and minimum 4.52%. With that, it is concluded that December month has achieved the highest average returns after the 2008 global financial crisis at (ASE), meaning that January month is not the dominant month in achieving high average returns after the 2008 global financial crisis at (ASE).

5.4 Hypotheses Testing

H01: January effect doesn't exist at the Amman Stock Exchange during the whole period (January 2000-December 2018).

To test the hypothesis, OLS has been used for this purpose and table 5 shows the results of regression analysis for the whole period study (Jan 2000-Dec 2018).

Table 5. Regression analysis for the whole period (Jan 2000-Dec 2018)

Month	Coefficient	Standard Error	t. Statistic	P-value
Dum. Jan	0.027079	0.009485	**2.8548*****	**0.0047**
Dum. Feb	-0.010158	0.009620	-1.0559	0.2922
Dum. Mar	0.003458	0.008585	0.4028	0.6875
Dum. Apr	0.004100	0.011496	0.3566	0.7217
Dum. May	0.005452	0.009360	0.5825	0.5608
Dum Jun	0.005652	0.013469	0.4196	0.6752
Dum. Jul	-0.002066	0.008273	-0.2497	0.8031
Dum. Aug	-0.004278	0.007259	-0.5893	0.5563
Dum. Sep	-0.001077	0.007013	-0.1536	0.8781
Dum. Oct	0.000950	0.014639	0.0649	0.9483
Dum. Nov	0.005196	0.012822	0.4052	0.6857
Dum. Dec	0.009411	0.008389	1.1218	0.2632
AR(1)	0.270270	0.101242	2.6695	0.0082
R^2	**10.82%**	**Adjusted R-squared**	**5.83%**	

*** Significant at 1% levels.

The results in table 5 indicate that January month has the highest returns compared to the other eleven months of the year; hence the coefficient is 0.027079 with t. statistic value of (2.8548) and P-value (0.0047) which is significant at 1%. The results also show that all months of the year achieved positive returns except February, July, August, and September, but the positives returns are insignificant. The results lead to reject the first hypothesis (H01) and accept the alternative one that the January effect exists at (ASE) during the whole period study (Jan 2000 – Dec 2018). The result is in line with the results of studies of Alrabadi and Al-Qudah (2012) and Gharaibeh (2017) in Jordan, proving the existence of January effect at (ASE) during the period 2002 – 2011 and the period 1988-2014 respectively. Also, the result is in line with other results of several studies, such as Rozeff and Kinney (1976), Mehdian and Perry (2002), Asteriou and Kavetsos (2006), Li and Gong (2015), Sahin, Topaloglu and Ege (2018).

H02: January effect does not exist at the Amman Stock Exchange pre-2008 financial crisis (January 2000-December 2007).

Table 6 shows the results of OLS regression analysis for period study (Jan 2000-Dec 2007).

Table 6. Regression analysis for the period (Jan 2000-Dec 2007)

Month	*Coefficient*	*Standard Error*	*t. Statistic*	*P-value*
Dum. Jan	0.057750	0.014335	**4.0287*****	**0.0001**
Dum. Feb	-0.019138	0.020500	-0.9335	0.3533
Dum. Mar	0.002175	0.018502	0.1175	0.9067
Dum. Apr	0.015850	0.025151	0.6302	0.5303
Dum. May	0.016850	0.014827	1.1364	0.2591
Dum Jun	0.024274	0.028100	0.8638	0.3902
Dum. Jul	0.011734	0.018104	0.6481	0.5187
Dum. Aug	0.010958	0.012352	0.8871	0.3777
Dum. Sep	0.006668	0.010916	0.6108	0.5430
Dum. Oct	0.025639	0.016697	1.5355	0.1286
Dum. Nov	0.028890	0.022070	1.3090	0.1942
Dum. Dec	-0.001040	0.016656	-0.0625	0.9503
AR(1)	0.212096	0.094036	2.2555	0.0268
R^2	**15.60%**	**Adjusted R-squared**	**5.19%**	

*** Significant at 1% levels.

The results in table 6 indicate that January has the highest returns compared to the other eleven months of the year; hence the coefficient is 0.057750 with t. value of statistic (4.0287) and P-value (0.0001) which is significant at 1%. The results also show that all months of the year achieved positive returns except February and December, but the positives returns are insignificant. The results lead to reject the second (H02) hypothesis and accept the alternative one that the January effect exists at (ASE) pre the 2008 financial crisis (January 2000-December 2007). The result is in line with the results of studies of Asteriou and Kavetsos (2006), Balint and Gica (2012), Diacanosu et al. (2012), Li and Gong (2015) and Hug and Hirschey (2019).

H03: January effect doesn't exist at the Amman Stock Exchange after the 2008 financial crisis (January 2009-December 2018).

Table 7 shows the results of OLS regression analysis for period study (Jan 2009-Dec 2018).

Table 7. Regression analysis for the period (Jan 2009-Dec 2018)

Month	*Coefficient*	*Standard Error*	*t. Statistic*	*P-value*
Dum. Jan	0.010020	0.009324	1.0746	0.2850
Dum. Feb	-0.007980	0.007376	-1.0819	0.2818
Dum. Mar	0.006390	0.007427	0.8603	0.3915
Dum. Apr	-0.010500	0.006829	-1.5376	0.1271
Dum. May	-0.008380	0.011775	-0.7117	0.4782
Dum Jun	-0.018040	0.004689	**-3.8472*****	**0.0002**
Dum. Jul	-0.010320	0.005270	**-1.9582***	**0.0528**
Dum. Aug	-0.011300	0.007271	-1.5541	0.1232
Dum. Sep	-0.000589	0.007586	-0.0777	0.9382
Dum. Oct	0.003352	0.007909	0.4239	0.6725
Dum. Nov	-0.000940	0.007931	-0.1185	0.9059
Dum. Dec	0.014681	0.008307	**1.7672***	**0.0801**
AR(1)	-0.095191	0.076829	-1.239000	0.2181
R^2	**14.64%**	**Adjusted R-squared**	**4.99%**	

***, * Significant at 1%, 10% levels respectively.

The results in table 7 indicate that December month has the highest positive returns compared to the other eleven months of the year, indicating a significant impact. The coefficient is 0.014681 with t. value of statistic (1.7672) and P-value (0.0801) which is statistically significant at 10%. The results also show that all months of the year achieved negative returns (Jun has the lowest returns -1.8%) except January, March, and October, but the positives returns of these months are insignificant. The results give evidence of the absence of January effect at (ASE) after the 2008 global financial crisis, which means that we are no longer able to advise the investors at (ASE) to buy stocks in December and sell them in January. Therefore, this result leads to accepting the third hypothesis (H03), stating "January effect does not exist at (ASE after the 2008 global financial crisis (January 2009-December 2018)".The result is in line with the results of studies of Balint and Gica (2012), Avdalovic and Milenkovic (2017), Sawitri and Astuty, (2018) and Ozturk et al., 2018.

6. Conclusion

In a nutshell, in 1970, Fama introduced the efficient market hypothesis (EMH), stating that no investor in the market can achieve abnormal returns if he used the price behavior in his investment strategies, because the new information randomly reaches the market, and the prices of stocks reflect the information directly and precisely. In this context, the phenomenon of the January effect violates this hypothesis, and this appears clear in several results of previous studies.

The current study investigated the existence of the January effect at Amman Stock Exchange (ASE) pre and posts the 2008 global financial crisis, as no study has investigated it before. The analysis takes on account of three periods as follows: the first period includes the 2008 global crisis (Jan 2000-Dec 2018), where results prove the existence of January effect at (ASE), while the second period is before the 2008 crisis (Jan 2000-Dec 2007), where the results prove the existence of January effect at (ASE). As for the third period, it is after the 2008 crisis (Jan 2009-Dec 2018), whose results prove the absence of the January effect at (ASE).

More importantly, the current paper gives significant suggestions to investors and fund managers, who still build their investment strategies on the previous results of studies conducted at (ASE) without investigating the existence of January effect after the 2008 global financial crisis. In other words, the effective suggestions lie in buying in Jun and sell in December rather than buy in December and sell in January.

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