THE WEEKEND EFFECT TESTING IN CAPITAL MARKET OF INDONESIA

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ABSTRACT

This study intends to prove the weekend effect in the capital market of Indonesia. To execute it, this study uses the market index return based on the name of the days in the week started from January 2015 to December 2019 as the proxy and the analysis of variance (ANOVA) as the model. A test of between-subjects' effects and the Tukey HSD become the tools to prove the impact of the trading days on the daily composite stock market index and their difference based on the name of the days, respectively. The test result of between-subjects' effects shows that the name of days has no impact on market return. In line with this result, the Tukey HSD test result indicates the market return among weekdays is similar. Therefore, this study summarizes that the weekend effect is unavailable.

Keywords: efficient market theory, market return, weekend effect anomaly.

INTRODUCTION

The efficient capital market happens when investors cannot get abnormal returns from stock trading because the market reacts quickly to new information (Hanafi, 2017). However, the results of the study proving the weak form of market efficiency are still contradictory. By utilizing Box-Jenkins, Utama (1992) unveils that the movement of the market index is predictable. Hadianto & Ida (2013) show the return of shares developing the LQ45 index is almost random. Khajar (2012) finds that the decrease in the market efficiency from the pre-crisis to the crisis period happens; the increase in this efficiency occurs from the crisis to the post-crisis period. Hawaldar, Rohit, & Pinto (2017) locate 7 of 41 stocks without random returns. Pervez, Rashid, Chowdhury, & Rahaman (2018) prove an inefficient market shown by the non-random movement of three market indexes: the Dhaka Stock Exchange (DSE) General Index, DSE Board Index, and DSE30 index.

The weak-form the capital market inefficiency indicates an anomaly. A weekend effect is one of the market anomalies that are seasonal (Gumanti & Utami, 2002). This effect happens when the Monday share returns are negative, but the rests are positive (Keim & Stambaugh, 1984). Lakonishok & Levi (1982) and Abraham & Ikenberry (1994) also affirm this effect by finding the average market return is negative on Monday, but the highest positive return is on Friday.

Yong & Ibrahim (1999) confirm this effect by uncovering the negative composite index return (CIR) is on Monday. On the other hand, the positive CIR is on Wednesday, Thursday, and Friday; the highest is on Friday. Poshakwale (1996) confirms this anomaly by discovering a positive Bombay Stock Exchange National Index (BSENI) return exists on Tuesday, Thursday, and Friday, but a negative exists on Monday and Wednesday; the highest occurs on Friday.

Unfortunately, this weekend effect does not fully get support from one study to other studies. Tandelilin & Algifari (1999) reveal that the uppermost return occurs on Wednesday, but the

lowermost is on Monday. Muzakhir (2017) finds the all-out return is on Wednesday; however, the negative return becoming the minimum is on Friday.

Gumanti & Ma'ruf (2004) locate that no difference in abnormal returns of shares from Monday to Friday. Sharma (2011) finds out the returns of the market index of Sensex and Nifty on Monday, Tuesday, Wednesday, Thursday, and Friday are similar. In line with their result, Chia (2014) demonstrates the market index return between Monday and Friday in Australia and New Zealand is similar. Also, Putra & Ardiana (2016) find the market return on Friday is the same as that on Monday, Tuesday, Wednesday, and Thursday.

Regarding these contradicting results, this study is present to prove the weekend effect in Indonesia by utilizing the composite stock price index returns. It is because this index functions to spot the movement tendency of all stocks in the market (Hartono, 2017).

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The weekend effect happens when the highest positive returns are on Friday (Abraham & Ikenberry, 1994); on the other hand, the negative stock returns are on Monday (Keim & Stambaugh, 1984; Rogalski, 1984; Abraham & Ikenberry, 1994). Psychologically, investors are lazy to transact the stocks on Monday; they hold the transaction. As a result, the demand for shares goes down and their price decreases. Conversely, the investors are optimistic on Friday; hence, they buy stocks so that the stock prices are up (Rystrom & Benson, 1989). The negative return on Monday and the utmost positive return on Friday are affirmed by Lakonishok & Levi (1982), Abraham & Ikenberry (1994), Poshakwale (1996), as well as Yong & Ibrahim (1999). By denoting this information, the first formulated hypothesis is as follows.

H_1:   The weekend effect is present if the highest positive return is on Friday and a negative return is on Monday.

RESEARCH METHOD

Definition of Research Variables

The variable used to test the weekend effect is the daily relative market return from Monday until Friday started between January 2015 and December 2019.

Method of Data Analysis

This study uses the analysis of variance (ANOVA). Referring to Ghozali (2016), this analysis is suitable for testing the difference in the daily relative share return based on the name of the days: Monday, Tuesday, Wednesday, Thursday, and Friday. According to Ghozali (2016), two assumptions are needed if ANOVA wants to be applied: the normality and the homogeneity of variance. Therefore, this study operates the one-sample Kolmogorov-Smirnov and the Levene test to prove the normality and the homogeneity of variance, respectively.

Method of Data Collection

To collect the data, we utilize the archival method. According to Hartono (2012), this method functions to collect secondary data. The intended data are the Jakarta Composite Index (^JKSE) that comes from finance.yahoo.com.

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RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 reveals the information related to the average, standard deviation, maximum and minimum of the relative return based on weekdays. The average relative return (ARR) on Monday and Tuesday are 0.9993804 and 0.9999666, separately; it means the negative total return occurs on these days. The standard deviation of ARR of these days is 0.01014084 and 0.00863753.

Additionally, the ARR on Wednesday, Thursday, and Friday are 1.0007579, 1.0007107, 1.0002573, respectively; it means the positive total return happens on these days. The standard deviation of ARR of these days is 0.00908668, 0.00912148, and 0.00830451.

Table 1. Descriptive Statistics Related to Relative Return

Based on the Name of the Days

The name of the day	N	Mean	Std. Deviation	Minimum	Maximum
Monday	192	0.9993804	0.01014084	0.96028	1.03230
Tuesday	195	0.9999666	0.00863753	0.96812	1.02501
Wednesday	198	1.0007579	0.00908668	0.96244	1.02307
Thursday	192	1.0007107	0.00912148	0.97033	1.04552
Friday	192	1.0002573	0.00830451	0.95994	1.02853
Total	969	1.0002172	**0.00907366**	0.95994	1.04552

Source: Output of IBM SPSS 19.

The test result of the required assumptions for ANOVA

Table 2 presents the one-sample Kolmogorov-Smirnov (KS) test result and notifies the probability value or the asymptotic significance (2-tailed) of Z-statistic of KS of 0.0001. Since this value is smaller than the 5% significance level (α), we refuse the null hypothesis stating the RR follows a normal distribution. According to Ghozali (2016), this condition is still acceptable for ANOVA because of the robustness.

Table 2. The test result of One-Sample Kolmogorov-Smirnov

Description		RR
N		969
Normal Parameters [a,b]	Mean	1.0002172
	Std. Deviation	0.00907366
Most Extreme Differences	Absolute	0.063
	Positive	0.052
	Negative	-0.063
Kolmogorov-Smirnov Z		1.973
Asymp. Sig. (2-tailed)		0.001

a. Test distribution is Normal,   b. Calculated from data.
Source: Output of IBM SPSS 19.

Table 3 exhibits the Levene (L) test result of the homogeneity of variances, where the probability value (sig.) of L-statistic is 0.169. Since this value surpasses α of 5%, we accept the null hypothesis stating the variance of RR is similar among the groups of the days.

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Table 3. The test result of homogeneity of variances of RR among the weekdays

Levene Statistic	df1	df2	Sig.
1.611	4	964	0.169

Source: Output of IBM SPSS 19.

The test result of the research hypothesis

The weekend effect happens when the average of the Friday total return is positive; however, on Monday is negative. To examine this effect, we use the output of tests of between-subjects effect in Table 4. In this table, the probability value (Sig.) of the F-statistic of DAYS is 0.549. Because this value exceeds α of 5%, the trading days own no effect on the average of RR.

Table 4. The Result of the Tests of Between-Subjects Effects

Dependent Variable: RR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.000[a]	4	6.291E-5	.763	.549
Intercept	969.269	1	969.269	11761263.695	.000
DAYS	.000	4	6.291E-5	.763	.549
Error	.079	964	8.241E-5		
Total	969.501	969			
Corrected Total	.080	968			

a. R Squared = 0.003 (Adjusted R Squared = -0.001)

Source: Output of IBM SPSS 19.

The homogeneous subset, provided by the Tukey HSD in Table 5, confirms the absence of the impact of days on the average of RR (ARR). In this table, the probability value (Sig.) is 0.567, and the average relative return from Monday until Friday is in one column. That condition points out the ARR from Monday until Friday is similar because this probability value goes beyond α of 5%.

Table 5. The Homogeneous Subset Result

Test conducted	Days	N	Subset 1
Tukey HSD [a,b,c]	Monday	192	.9993804
	Tuesday	195	.9999666
	Wednesday	198	1.0007579
	Thursday	192	1.0007107
	Friday	192	1.0002573
	Sig.		.567

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 8,24E-005.

a. Uses Harmonic Mean Sample Size = 193,771,

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = 0,05.

Source: Output of IBM SPSS 19.

DISCUSSION

By mentioning the statistical hypothesis test, we accept the null hypothesis stating no difference in ARR form Monday to Friday, and the names of the trading days have no impact on ARR. These situations indicate the weekend effect anomaly does not exist so that investors cannot arrange the strategy to trade by using the difference in return based on the trading days. Because this effect is not proven, this study completely supports the theory of market efficiency in the weak form. According to Hartono (2017), in an efficient market, investors react speedily to new information entering the market. As a consequence, all prices change until they attain a new equilibrium. Hence, this study confirms the study result of Gumanti & Ma'ruf (2004), Sharma (2011), Chia (2014), as well as Putra & Ardiana (2016) displaying no weekend effect happens.

CONCLUSION, LIMITATION, AND RECOMMENDATION

This study intends to investigate and analyze the weekend effect in the capital market of Indonesia. By applying the daily composite stock market index, this study infers that no weekend effect in this market: the return market is similar from Monday until Friday.

As a limitation, this study only uses the daily composite stock market index as the object in five years as the time observation to detect weekend effect anomaly. Based on this limitation, the next researcher can elongate the time observation into 10 or 15 years, take the stocks becoming the constituent of the LQ45 and Kompas 100 index, add bullish and bearish period as two levels of the factor besides the name of the days into the ANOVA model.

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REFERENCES

[1]. Abraham, A., & Ikenberry. (1994). The Individual Investor and the Weekend Effect. *The Journal of Financial and Quantitative Analysis, 29*(2), 263-277.

[2]. Chia, R. C. (2014). The Disappearing Day-of-the-Week Effect in Australia and New Zealand. *Malaysian Journal of Business and Economics, 1*(2), 51- 61.

[3]. Ghozali, I. (2016). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 23.* Semarang: Badan Penerbit Universitas Diponegoro.

[4]. Gumanti, T. A., & Ma'ruf, F. (2004). Efek Akhir Pekan Terhadap Return Saham (Studi Kasus Perusahaan LQ45). *Manajemen Usahawan Indonesia, 33*(11), 22-28.

[5]. Gumanti, T. A., & Utami, E. S. (2002). Bentuk Pasar Efisien dan Pengujiannya. *Jurnal Akuntansi & Keuangan, 4*(1), 54-68.

[6]. Hadianto, B., & Ida, T. (2013). Pengujian Efisiensi Bentuk Lemah: Investigasi Empirik pada Saham Pembentuk Indeks LQ45 di Bursa Efek Indonesia. *Jurnal Akuntansi, 5*(2), 102-106.

[7]. Hanafi, M. M. (2017). *Manajemen Keuangan* (2 ed.). Yogyakarta: Badan Penerbit Universitas Gadjah Mada.

[8]. Hartono, J. (2012). *Metodologi Penelitian Bisnis: Salah Kaprah & Pengalaman-Pengalaman* (5 ed.). Yogyakarta: Badan Penerbit Fakultas Ekonomi Universitas Gadjah Mada.

[9]. Hartono, J. (2017). *Teori Portofolio & Analisis Investasi* (11 ed.). Yogyakarta: Badan Penerbit Fakultas Ekonomi Universitas Gadjah Mada.

[10]. Hawaldar, I. T., Rohit, B., & Pinto, P. (2017). Testing of weak form of efficient market hypothesis: evidence from the Bahrain Bourse. *Investment Management and Financial Innovations, 14*(2), 376-385.

[11]. Keim, D. B., & Stambaugh, R. F. (1984). A Further Investigation of the Weekend Effect in Stock Return. *The Journal of Finance, 39*(3), 819-835.

[12]. Khajar, I. (2012). Efisiensi Pasar Modal Syariah Indonesia Sebelum dan Setelah Krisis Finansial Global 2018. *Jurnal Keuangan dan Perbankan, 16*(1), 66-76.

[13]. Lakonishok, J., & Levi, M. (1982). Weekend Effects on Stock Returns: A Note. *The Journal of Finance, XXXVII*(3), 883-889.

[14]. Pervez, M., Rashid, M. H., Chowdhury, M. A., & Rahaman, M. (2018). Predicting the Stock Market Efficiency in Weak Form: A Study on Dhaka Stock Exchange. *International Journal of Economics and Financial Issues, 8*(5), 88-95.

[15]. Poshakwale, S. (1996). Evidence on Weak Form Efficiency and Day of the Week Effect in the Indian Stock Market. *Finance India, 10*(3), 605-616.

[16]. Putra, I. K., & Ardiana, P. A. (2016). Analisis The Monday Effect di Bursa Efek Indonesia. *E-Jurnal Akuntansi Universitas Udayana, 17*(1), 591-614.

[17]. Rogalski, R. J. (1984). A Further Investigation of the Weekend Effect in Stock Returns: Discussion. *The Journal of Finance, 39*(3), 835-837.

[18]. Rystrom, D. S., & Benson, E. D. (1989). Investor Psychology and the Day-of-the-Week Effect. *Financial Analysts Journal, 45*(5), 76-78.

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P a g e | 52

[19]. Sharma, S. (2011). Day of Week Effect: Evidences from Indian Stock Market. *Indian Journal of Commerce & Management Studies, 2*(6), 25-30.

[20]. Suliyanto. (2009). *Metode Riset Bisnis.* Yogyakarta: Penerbit ANDI.

[21]. Tandelilin, E., & Algifari. (1999). Pengaruh Hari Perdagangan Terhadap Return Saham di Bursa Efek Jakarta. *Jurnal Ekonomi & Bisnis Indonesia, 14*(4), 111-123.

[22]. Utama, S. (1992). Pengujian Efisiensi Pasar Bentuk Lemah di Bursa Efek Jakarta Dengan Menggunakan Model Univariate Box-Jenkins. *Manajemen Usahawan Indonesia, 21*(6), 2-7.

[23]. Yong, O., & Ibrahim, I. (1999). Is There Day-of-the-Week Effect in the Malaysian Stock Exchange? *Jurnal Pengurusan, 18*, 25-38.