

How to Cite

Argantha, I. P. A., & Rahyuda, H. (2023). Analysis of anomaly turn of the month effect on stock return in the Indonesian capital market before and during the COVID-19 pandemic. *International Journal of Business, Economics & Management*, 6(1), 41-48. <https://doi.org/10.21744/ijbem.v6n1.2072>

Analysis of Anomaly Turn of the Month Effect on Stock Return in the Indonesian Capital Market before and during the COVID-19 Pandemic

I Putu Arie Argantha

Faculty of Economics and Business, Udayana University, Denpasar, Indonesia
Corresponding author email: iputuarieargantha@gmail.com

Henny Rahyuda

Faculty of Economics and Business, Udayana University, Denpasar, Indonesia

Abstract---*This study aims to examine the presence of an anomaly in the turn-of-the-month effect in Indonesia before and during the COVID-19 pandemic. The population of this study are companies listed on the LQ45 index for the 2019-2021 period. Using the purposive sampling technique and obtained 36 samples of companies. This study will compare the average return and average abnormal return of each sample which has been grouped based on the turn of the month and the rest of the month both before and during COVID-19. This study used a different test, namely the paired sample t-test which was tested using the SPSS application. The analysis result provides evidence that there was an anomaly in the turn-of-the-month effect before COVID-19 and the effect disappeared when Indonesia experienced the COVID-19 pandemic. This study also found a difference in abnormal returns in the turn of the month before and during COVID-19 where the abnormal return value was higher during the COVID-19 pandemic.*

Keywords---*anomaly, COVID-19 pandemic, market efficiency, turn-of-the-month effect.*

Introduction

The anomaly of the turn-of-the-month effect is a condition when stocks show a higher return on lunar transition days compared to non-monthly days (Pompian, 2021). The concept of an anomaly turn of the month effect was initiated by Ariel (1987), who found patterns of abnormal movement on the transitional days of the month, this pattern has been proven to be different from the January effect because the data for this study uses stock price data for 19 years without using data for January. Testing the turn of the month effect anomaly is done by dividing transaction days into two groups, namely transitional days and non-transitional days, calculating daily returns for the two groups, and conducting different tests on the two groups (Arendas & Kotlebova, 2019). That condition is no definite reason for the occurrence of the anomaly of the turn of the month effect; one of the hypotheses that cause the anomaly of the turn of the month effect comes from Ogden (1990), who introduced the hypothesis of liquidity anomaly of the turn of the month effect where this hypothesis states that the anomaly of the turn of the month effect is caused by the standardization of the payment system in the United States, especially regarding the disbursement of salaries during the transitional period of the month. As a result of this standardization, investors realize substantial cash receipts at the turn of the month and reinvest, which induces spikes in stock returns at the turn (Schwert, 2003; Agrawal & Agrawal, 2015).

Research related to the anomaly of the turn-of-the-month effect has been carried out in various countries. Kayacetin & Lekpek (2016), examined the existence of a turn-of-the-month effect on the return of the Turkish Stock Index. This study found a turn-of-the-month effect on the Turkish Stock Index. Aziz & Ansari (2018), also conducted the turn-of-the-month effect test on 12 Asia-Pacific stock market indices from 2000 to 2015. They found a significant turn-of-the-month effect pattern in 11 of the 12 countries, and the turn-of-the-month effect was not found significantly only in years of the financial crisis. Arendas & Kotlebova (2019), examined a turn-of-the-month effect

in 11 stock indices of Central and Eastern Europe (CEE) member countries; of the 11 country indexes, seven had a turn-of-the-month effect. [Obalade & Muzindutsi \(2020\)](#), found a turn-of-the-month effect that was not static on the African stock market. [Raffaele & Rosella \(2020\)](#), found a turn-of-the-month effect on the Shanghai Composite Index. This effect was allegedly influenced by the monetary policy, which had an impact on liquidity and investor confidence. Recent research by [Singh et al. \(2021\)](#), found a turn-of-the-month effect on the Stock Market Indices of Brazil, India, and China from January 2000 to 2017, as evidenced by the higher average return in the turn-of-the-month effect period compared to the non-turn-of-the-month effect. [Irtiza et al. \(2021\)](#), found a turn-of-the-month effect on the National Stock Exchange and Bombay Stock, where the presence is more robust in companies with small and medium capitalization, and [Tadepalli et al. \(2022\)](#), found a turn-of-the-month effect in the Indian Stock Market Index (NSE).

Research on the turn-of-the-month effect itself is not very popular on the Indonesia Stock Exchange; 2017 research was conducted by [Desyanti \(2017\)](#), with the result that there was no turn-of-the-month effect on the LQ45 Index and the consumption sector index in 2014-2016 but found the turn of the month effect on the financial sector index in the same year period. [Ningtyas \(2017\)](#), found a turn-of-the-month effect on the LQ45 Index in 2016. [Bagana & Himmawan \(2018\)](#), saw a turn-of-the-month effect on the JCI from 2000-2017. Then [Oktaryani et al. \(2021\)](#), where this study's results stated that the phenomenon of the turn of the month affects the Jakarta Composite Index (IHSG) and the LQ45 Index for the 2015-2020 period, was not significantly proven.

[Aziz & Ansari \(2018\)](#), stated that an insignificant turn-of-the-month effect occurred during a financial crisis. The same thing was said by [Singh et al. \(2021\)](#). The phenomenon of events that have impacted the Indonesian economy is the Coronavirus Disease 2019 or shortened to COVID-19. This virus originated in Wuhan, China, and spread quickly to all parts of the world; this virus was first detected in Indonesia on March 2, 2020, through the announcement of the first patient by the President of the Republic of Indonesia ([Firdaus, 2021](#)). This announcement has harmed the economy in Indonesia and the capital market in Indonesia.

During COVID-19, many companies laid off their workforce to save costs due to the Community Activity Restriction Policy (PPKM); this meant that people lost income which made people's motivation to invest at the turn of the monthly decrease, which led to a weakening of the presence of an anomaly turn of the month effect in the market share. There is a unique phenomenon in the COVID-19 pandemic because even though there was a decline in the performance of the LQ45 Index and an increase in the open unemployment rate, [Fadly \(2021\)](#), stated that there was an increase in the number of investors from the previous 1,619,372 (2018) to 2,484,354 (the year 2019) this increase reached 53.41%. Hence, we need to examine the existence of an anomaly of the turn of the month effect on this phenomenon.

Due to the inconsistent results of previous studies and very little empirical evidence regarding the turn of the month effect in Indonesia, the researchers wanted to conduct a study entitled "Anomaly Analysis of Turn of the Month Effect on Stock Returns in the Indonesian Capital Market Before and During the COVID-19 Pandemic." In this study, the researchers wanted to conduct another study to prove the existence of an anomaly of the turn of the month effect in Indonesia through the LQ45 Index in the 2019 period and the presence of an anomaly of the turn of the month effect when Indonesia experienced an economic downturn due to the COVID-19 virus pandemic. This research is also unique because it does not only use the cyclical pattern testing method to detect the presence of an anomaly of the turn of the month effect but also uses the event study method to see whether the anomaly of the turn of the month effect is valuable information or not for investors.

Literature review and hypothesis development

The turn-of-the-month effect is an anomaly in which the rate of return on the month transition (TOM) is higher (positive) compared to non-month days (ROM). The day at the turn of the month is often interpreted as the last day of one month up to the first three days of the following month. According to [Ogden \(1990\)](#), this anomaly is thought to occur due to the standardization of cash flows that happen every month. The existence of an anomaly turn-of-the-month effect is tested using a cyclical pattern test by comparing the return period of TOM with ROM.

Research has been carried out by several researchers, such as [Kayacetin & Lekpek \(2016\)](#), who found that there is a turn-of-the-month effect on the return on Turkish equity. This study shows that the turn-of-the-month effect is very significant in the BIST100 index during 1988–2014. [Aziz & Ansari \(2018\)](#), found a turn-of-the-month pattern in 11 of the 12 leading market indices in Asia-Pacific countries in the 2000-2015 period. Turn of the month is also present in the stock market indices of 11 countries in Central and Eastern Europe. This conclusion is stated in the research of [Arendas & Kotlebova \(2019\)](#). In China, [Raffaele & Rosella \(2020\)](#), found a turn of the month on the

Shanghai Composite Index. In Indonesia, [Desyanti \(2017\)](#), found a turn-of-the-month effect in the 2014-2016 financial sector index.

H1: An anomaly of the turn-of-the-month effect is characterized by a statistically significant difference in average return on the month transitional days (TOM) and non-monthly transition days (ROM) in the LQ45 index before the COVID-19 pandemic.

H2: An anomaly of the turn-of-the-month effect is indicated by a statistically significant difference in average return on the month transitional days (TOM) and non-monthly transition days (ROM) in the LQ45 index during the COVID-19 pandemic.

In addition to cyclical testing patterns, market efficiency can also be tested through event study testing. According to [Elton et al., \(2009\)](#), this test is carried out by detecting the presence of abnormal returns. Research conducted by [Plastun et al. \(2019\)](#), found no significant abnormal returns during the transitional period of the month (TOM) in the US stock market in 1900-2018. [Tadepalli et al. \(2021\)](#), found abnormal returns in the transitional period of the month (TOM) on the Indian stock market in 2009-2017 then [Vidal & Vidal-Garcia \(2022\)](#), found abnormal returns in the transitional period of the month (TOM) on UK stock market in 1990-2021. A significant abnormal return during the transition period of the month (TOM) indicates an inefficient market in the semi-strong form. This research wants to know the difference between abnormal returns in the transitional period (TOM) before COVID-19 and during COVID-19.

H3: There is a statistically significant difference in the average abnormal return on the day of the month (TOM) in the LQ45 index before COVID-19 and during COVID-19.

Methods

In this study, to test the turn of the month, the researcher will first determine the turn of the month (TOM) and rest of the month (ROM) periods, calculate the actual return & abnormal return of each period and calculate the average actual return & average abnormal returns from each period are then compared using different test techniques.

The hypothesis states that through the test of the weak market shape of the cyclical pattern if there is a significant difference in returns on the month transitional day (TOM) and the non-transitional day of the month (ROM) during the observation period, it can be concluded that there is an anomaly turn of the month effect. In contrast, through the semi-market form test, If there is a significant difference in abnormal returns on the month transitional day (TOM) and the non-monthly day (ROM) during the observation period, it can conclude that the turn of the month is one of the vital information that can make stock prices react.

This research was conducted at the Indonesia Stock Exchange (IDX), accessed on www.idx.co.id and the yahoo finance website, where the data used includes companies in the LQ45 index in the 2019-2020 period. The population in the study were all companies listed on the Indonesia Stock Exchange. They had in the LQ45 index from February 2019 to February 2020, representing the period before the COVID-19 pandemic, while March 2020 to March 2021 will represent the period during the COVID-19 pandemic. Data on companies listed on the LQ45 Index from February 2019 to March 2021 are 54 companies. The sampling technique in this study was non-probability sampling using the purposive sampling method. The purposive sampling method is a sampling technique with specific considerations or criteria. The criteria for taking the sample in this study were: all companies that successively entered the LQ45 index for the period February 2019 to March 2021, with a total of 36 companies that survived.

The data analysis technique in this study used the t-test and different test techniques. The parametric test used in this study is the independent sample t-test and paired sample t-test. The non-parametric tests used in this study were the Wilcoxon signed ranks test and the Mann-Whitney U test.

Results and Discussion

The results of testing the difference between the monthly average return at the turn of the month and the rest of the month before COVID-19 are shown in Table 1.

Table 1
Results of the Paired Sample T-Test Average Monthly Return for the TOM and ROM periods before COVID-19

Variable	Total	t-value	Sig (2-Tailed)	Criteria	Information
AR Turn of the month – Rest of the month	12	2,934	0,014	0,050	Significance

Primary Data, 2023

Based on Table 1, the monthly average return in the turn of the month (TOM) and rest of the month (ROM) periods before COVID-19 show a significance value of 0.014. A significance value below 0.05 indicates a significant difference. So it can be concluded that H_0 is rejected and H_a is accepted, this means that there is a difference in average return in the turn of the month (TOM) and rest of the month (ROM) periods before COVID-19 so H_1 is proven. The results of testing the difference between the monthly average return at the turn of the month and the rest of the month during COVID-19 are shown in Table 2.

Table 2
Results of the Paired Sample T-Test Average Monthly Return for the TOM and ROM periods during COVID-19

Variable	Total	t-value	Sig (2-Tailed)	Criteria	Information
AR Turn of the month – Rest of the month	12	1,882	0,086	0,050	Significance

Primary Data, 2023

Based on table 2 the average monthly return in the turn of the month (TOM) and rest of the month (ROM) periods during COVID-19 shows a significance value of 0.086. A significance value above 0.05 indicates no statistically significant difference. So it can be concluded that H_0 is accepted and H_a is rejected, this means that there is no difference in average return in the turn of the month (TOM) and rest of the month (ROM) periods during COVID-19 so H_2 is not proven. The results of testing the differences in monthly average abnormal returns in the turn of the month before and during COVID-19 are shown in table 3.

Table 3
Results of the Paired Sample T-Test Average Abnormal Return monthly for the TOM period before and during COVID-19

Variable	Total	t-value	Sig (2-Tailed)	Criteria	Information
AAR Turn of the month before COVID-19 – AAR Turn of the month during COVID-19	12	-2,234	0,047	0,050	Signifikan

Primary Data, 2023

Based on table 3, the average monthly abnormal return in the turn of the month (TOM) period before and during COVID-19 shows a significance value of 0.047. A significance value below 0.05 indicates a statistically significant difference. So it can conclude that H_0 is rejected and H_a is accepted, this means that there is a difference in average return in the turn of the month (TOM) period before and during COVID-19 so H_3 is proven.

There is an anomaly in the turn of the month effect which is marked by a statistically significant difference in average return on month transition days (TOM) and non-month transition days (ROM) in the LQ45 index before the COVID-19 pandemic

The results of testing hypothesis 1 (H_1) show that there is an anomaly of the turn of the month effect which is indicated by the difference in average return in the turn of the month (TOM) and rest of the month (ROM) periods before COVID-19. The monthly average return at the turn of the month is 0.001439, which is higher than the average monthly return in the rest of the month period, which is -0.002104.

Fama (1970), stated in market efficiency theory that investors are rational so that in an efficient market prices can reflect all or all of the available information. Brigham & Daves (2018), also added that in efficiency theory, stock prices move randomly so it is impossible for investors to consistently beat the market.

The results of testing hypothesis 1 (H_1) found an anomaly in the stock market with the presence of the turn of the month effect, namely a situation where the average return on the transitional day of the month is higher than ordinary days where in market efficiency theory the stock price should move randomly (Spees & Lave, 2007; Chordia et al., 2008). so that there will be no statistically significant difference in average return on the transitional day of the month with the usual days. This proves the occurrence of irregularities in the market as a result of market

participants who cannot always be rational in making investments. [Kim \(2021\)](#), states that investors become very confident and trade stocks based on their subjective beliefs rather than analytical recommendations when they are in optimistic or pessimistic sentiment. This causes deviations in price movements in the market share.

In Indonesia, for civil servants, payment of salaries is carried out on the 1st based on Regulation of the Head of the Civil Service Agency Number 18 of 2006, while salaries for private employees are paid on the 25th and the following date, [Idris \(2017\)](#). It is this receipt of additional funds from the salary that gives investors optimistic sentiment to invest on the transitional days of the month so that the average return at the transition of the month is higher than usual. This result is also following the concept of [Ogden \(1990\)](#), which states that the turn of the month effect occurs due to standardization in the payment system in the United States, especially the disbursement of salaries which causes this anomaly of the turn of the month effect to occur. The results of this study are following several previous studies, namely [Desyanti \(2017\)](#), [Ningtyas \(2017\)](#) and [Bagana & Himmawan \(2018\)](#), who found a turn-of-the-month effect on the Indonesian stock market.

There is an anomaly in the turn of the month effect which is marked by a statistically significant difference in average return on month transition days (TOM) and non-month transition days (ROM) in the LQ45 index during the COVID-19 pandemic

The results of testing hypothesis 2 (H2) statistically show that there is no turn-of-the-month effect anomaly which is characterized by no difference in average return in the turn-of-the-month (TOM) and rest-of-the-month (ROM) periods during COVID-19. This result is not following hypothesis 2 (H2), although the average monthly average return at the turn of the month is greater, namely 0.005552 than the average monthly average return in the rest of the month period, which is -0.001196, but statistically through different tests found no significant difference. These results cannot prove the occurrence of an anomaly in the turn-of-the-month effect ([Harahap et al., 2021](#)).

[Singh et al. \(2021\)](#), state that the existence of an insignificant turn-of-the-month effect anomaly occurs due to drastic changes in economic conditions. The COVID-19 pandemic is one of the outbreaks that has had a negative economic impact on the economy of Indonesia. The COVID-19 pandemic caused the Indonesian economy in 2020 to experience a contraction in the economic growth of -2.07% [Yenni Ratna \(2022\)](#). The number of investors did experience a sizeable increase in 2020, namely 53.41% more than in 2019 or an increase of 864,982 [Fadly \(2021\)](#), but this increase was also followed by an increase in the open unemployment rate from 5.23% in 2019 to 7.70% in 2020.

Regulations regarding Large-Scale Social Restrictions (PSBB) resulted in lockdowns in several cities to break the chain of the COVID-19 pandemic, this regulation caused an economic downturn which led to Yenni Ratna's Termination of Employment (PHK) (2022), this caused the community as investors do not receive a salary at the turn of the month so that investors are not motivated to invest on the turn of the month.

The results of this study are following several previous studies, namely [Desyanti \(2017\)](#), [Ningtyas \(2017\)](#) and [Bagana & Himmawan \(2018\)](#), who found a turn-of-the-month effect on the Indonesian stock market.

There is an anomaly in the turn of the month effect which is marked by a statistically significant difference in average return on month transition days (TOM) and non-month transition days (ROM) in the LQ45 index during the COVID-19 pandemic

The results of testing hypothesis 2 (H2) statistically show that there is no turn-of-the-month effect anomaly which is characterized by no difference in average return in the turn-of-the-month (TOM) and rest-of-the-month (ROM) periods during COVID-19. This result is not following hypothesis 2 (H2), although the average monthly average return at the turn of the month is greater, namely 0.005552 than the average monthly average return in the rest of the month period, which is -0.001196, but statistically through different tests found no significant difference. These results cannot prove the occurrence of an anomaly in the turn-of-the-month effect ([Kayacetin & Lekpek, 2016](#); [Kunkel et al., 2003](#)).

[Singh et al. \(2021\)](#), states that the existence of an insignificant turn-of-the-month effect anomaly occurs due to drastic changes in economic conditions. The COVID-19 pandemic is one of the outbreaks that has had a negative economic impact on the economy of Indonesia. The COVID-19 pandemic caused the Indonesian economy in 2020 to experience a contraction in the economic growth of -2.07% [Yenni Ratna \(2022\)](#). The number of investors did experience a sizeable increase in 2020, namely 53.41% more than in 2019 or an increase of 864,982 [Fadly \(2021\)](#), but this increase was also followed by an increase in the open unemployment rate from 5.23% in 2019 to 7.70% in 2020.

Regulations regarding Large-Scale Social Restrictions (PSBB) resulted in lockdowns in several cities to break the chain of the COVID-19 pandemic, this regulation caused an economic downturn which led to Yenni Ratna's Termination of Employment (PHK) (2022), this caused the community as investors do not receive a salary at the turn of the month so that investors are not motivated to invest on the turn of the month. The results of this study are following several previous studies, namely Aziz & Ansari (2018) and Singh et al. (2021), which did not find any anomaly in the turn-of-the-month effect when the economic crisis occurred.

There is a statistically significant difference in the average abnormal return on lunar transition days (TOM) in the LQ45 index before COVID-19 and during COVID-19

The results of testing hypothesis 3 (H3) show that there is a difference in the average abnormal return in the turn of the month (TOM) period before and during COVID-19. These results are following hypothesis 3 (H3). These results prove that the market is not efficient in a semi-strong form and COVID-19 is an important event that can affect the existence of the turn-of-the-month effect. Interestingly, the average abnormal return for the turn of the month (TOM) period before COVID-19 was lower, namely -0.000914 than the average abnormal return for the turn of the month (TOM) during COVID-19, which had a value of 0.004949.

The results of this study are following several previous studies, namely, Tadepalli et al. (2022), and Vidal & Vidal-Garcia (2022), which found differences in average abnormal returns in the transitional period of the month (TOM) in the UK stock market in 1990-2021.

The higher average abnormal return during the TOM period during COVID-19 than the TOM before COVID-19 could have happened because when the COVID-19 pandemic hit Indonesia, people made investments in a new source of income to generate income, this was shown through an increase in the number of investors which increased by a number 53.41%, however, the turn of the month effect was not found significantly because the salaries given to the public as investors during COVID-19 were uncertain so that the community as investors were not motivated to invest on the turn of the month so that the investment took place evenly both on the month transition date and the date outside the month transition.

Conclusion

The results of this study indicate that the turn-of-the-month effect anomaly appeared before the COVID-19 pandemic and was not found significantly when the COVID-19 pandemic occurred. This result is because, before the COVID-19 pandemic, the average distribution of salary distribution was on the transitional date of the month so that the public as investors received additional funds that motivated and encouraged them to invest so that the average return on the transitional day of the month was higher than on other days. month transition day whereas no turn-of-the-month effect was found during the COVID-19 pandemic occurred due to a decrease in economic activity due to government policies such as lockdowns and the imposition of restrictions on community activities (PPKM) which caused an increase in the unemployment rate and a change in the distribution date of distribution of salaries so that people were not motivated to invest at the turn of the month.

Even though the turn of the month effect anomaly was not found during COVID-19. This study found that there were differences in average abnormal returns in the turn-of-the-month period before and during the COVID-19 pandemic. The average abnormal return for the turn of the month during COVID-19 was higher than the average abnormal return for the turn of the month before COVID-19. This result occurred because when COVID-19 occurred, people lost their monthly income and tried to find new, promising sources of income. This was shown by an increase in the total investment volume of 53.41%, this condition invested no longer concentrated on the transitional date of the month and the occurrence of an average abnormal return which was higher in the turn of the month when COVID-19 compared to when COVID-19 had not occurred. Through this difference, it can be concluded that COVID-19 is an event that affects the existence of the anomaly of the turn-of-the-month effect.

References

- Agrawal, S., & Agrawal, J. (2015). Survey on anomaly detection using data mining techniques. *Procedia Computer Science*, 60, 708-713. <https://doi.org/10.1016/j.procs.2015.08.220>
- Arendas, P., & Kotlebova, J. (2019). The turn of the month effect on CEE stock markets. *International Journal of Financial Studies*, 7(4), 57.
- Ariel, R. A. (1987). A monthly effect in stock returns. *Journal of financial economics*, 18(1), 161-174. [https://doi.org/10.1016/0304-405X\(87\)90066-3](https://doi.org/10.1016/0304-405X(87)90066-3)

- Aziz, T., & Ansari, V. A. (2018). The turn of the month effect in Asia-Pacific markets: New evidence. *Global Business Review*, 19(1), 214-226.
- Bagana, B. D. and Himmawan, D. N. A. (2018). Pertimbangan Investor dalam Berinvestasi Berdasarkan Day of The Week Effect dan Turn of Month Effect. *Jurnal Bisnis dan Ekonomi*, 25(2):186–193.
- Brigham, E. F., & Daves, P. R. (2018). *Intermediate financial management*. Cengage Learning.
- Chordia, T., Roll, R., & Subrahmanyam, A. (2008). Liquidity and market efficiency. *Journal of financial Economics*, 87(2), 249-268. <https://doi.org/10.1016/j.jfineco.2007.03.005>
- Desyanti, V. A. (2017). Analisis Anomali Pasar Modal Di Indonesia (Studi Kasus Indeks LQ 45, Indeks Sektor Konsumsi Dan Indeks Sektor Keuangan Tahun 2014-2016). *Jurnal Ilmiah Mahasiswa FEB*, 5(2).
- Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2009). *Modern portfolio theory and investment analysis*. John Wiley & Sons.
- Fadly, S. R. 2021. Aktivitas Pasar Modal Indonesia Di Era Pandemi, Kementerian Keuangan Republik Indonesia.
- Fama, E. F. 1970. Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25(2):383–417.
- Firdaus, I. (2021). 2 Maret Setahun Lalu, Jokowi Umumkan Pasien Pertama COVID-19, Kompas.
- Harahap, R. M., Mustaruddin, M., & Rustam, R. (2021). The effect of efficiency, market power, debt, and risk on company performance and their impact on dividend policy on the manufacturing sector in the Indonesia stock exchange. *International Journal of Business, Economics & Management*, 4(4), 477-486. <https://doi.org/10.21744/ijbem.v4n4.1804>
- Idris, M. (2017). Gajian PNS Tanggal berapa untuk Pusat dan Daerah?
- Irtiza, M. S., Khan, S., Baig, N., Tirmizi, S. M. A., & Ahmad, I. (2021). The turn-of-the-month effect in Pakistani stock market. *Future Business Journal*, 7, 1-11.
- Kayacetin, V., & Lekpek, S. (2016). Turn-of-the-month effect: New evidence from an emerging stock market. *Finance Research Letters*, 18, 142-157. <https://doi.org/10.1016/j.frl.2016.04.012>
- Kayacetin, V., & Lekpek, S. (2016). Turn-of-the-month effect: New evidence from an emerging stock market. *Finance Research Letters*, 18, 142-157. <https://doi.org/10.1016/j.frl.2016.04.012>
- Kim, K., Ryu, D., & Yu, J. (2021). Do sentiment trades explain investor overconfidence around analyst recommendation revisions?. *Research in International Business and Finance*, 56, 101376. <https://doi.org/10.1016/j.ribaf.2020.101376>
- Kunkel, R. A., Compton, W. S., & Beyer, S. (2003). The turn-of-the-month effect still lives: the international evidence. *International Review of Financial Analysis*, 12(2), 207-221. [https://doi.org/10.1016/S1057-5219\(03\)00007-3](https://doi.org/10.1016/S1057-5219(03)00007-3)
- Ningtyas, M. N. (2017). Pengujian Calendar Effect di Bursa Efek Indonesia tahun 2016. *Jurnal Penelitian Teori dan Terapan Akuntansi (PETA)*, 2(2), 76-86.
- Obalade, A. A., & Muzindutsi, P. F. (2020). Static or adaptive? the month-of-the-year and intra-month effects in African stock markets. *International Journal of Monetary Economics and Finance*, 13(3), 215-234.
- Ogden, J. P. (1990). Turn-of-month evaluations of liquid profits and stock returns: A common explanation for the monthly and January effects. *The Journal of Finance*, 45(4), 1259-1272.
- Oktaryani, G. S., Negara, I. K., Retnowati, W., & Kusmayadi, I. (2021). Fenomena Anomali Musiman Indeks Harga Saham Di Indonesia. *Jurnal Magister Manajemen Unram Vol*, 10(2).
- Plastun, A., Sibande, X., Gupta, R., & Wohar, M. E. (2019). Rise and fall of calendar anomalies over a century. *The North American Journal of Economics and Finance*, 49, 181-205. <https://doi.org/10.1016/j.najef.2019.04.011>
- Pompian, M. (2021). *Behavioral Finance and Your Portofolio*. John Wiley & Sons. Canada: Wiley.
- Pratiwi, Y. R. (2022). Pemulihan perekonomian Indonesia setelah kontraksi akibat pandemi Covid-19. *Diakses pada https://www.djkn.kemenkeu.go.id/kpknl-banjarmasin/baca-artikel/14769/Pemulihan-Perekonomian-Indonesia-Setelah-Kontraksi-Akibat-Pandemi-Covid-19.html*.
- Raffaele, P. O. & Rosella, P. S. (2020). The Cause of the Turn-of-month Effect in the Chinese Security Market: An Empirical Study of the Liquidity Hypothesis. *Advanced Corporate Finance* 1(1):1-60.
- Schwert, G. W. (2003). Anomalies and market efficiency. *Handbook of the Economics of Finance*, 1, 939-974. [https://doi.org/10.1016/S1574-0102\(03\)01024-0](https://doi.org/10.1016/S1574-0102(03)01024-0)
- Singh, G., Bhattacharjee, K., & Kumar, S. (2021). Turn-of-the-month effect in three major emerging countries. *Managerial Finance*, 47(4), 555-569.
- Spees, K., & Lave, L. B. (2007). Demand response and electricity market efficiency. *The Electricity Journal*, 20(3), 69-85. <https://doi.org/10.1016/j.tej.2007.01.006>
- Tadepalli, M. S., Jain, R. K., & Metri, A. B. A. (2022). An Enquiry into the Persistence of Turn-of-the-Month Effect on Stock Markets in India: Insights and Perspectives on a Seasonal Anomaly. *Business Perspectives and Research*, 10(1), 9-26.

- Tadepalli, M. S., Jain, R. K., & Metri, B. (2021). An Inquiry into the Persistence of Holiday Effect on Stock Markets in India: Insights and Perspectives on a Seasonal Anomaly. *FII B Business Review*, 23197145211016894.
- Vidal, M., & Vidal-García, J. (2022). Turn of the Month Effect. *Available at SSRN*.