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Does Friday-Monday Dance with Harmony?

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Abstract

This research is about the weekend effect, a combination of Friday and Monday, and its impact on Monday trading volume. This study was conducted for 2018-2019 data. The data used are the Indonesian Composite Index (ICI), Liquid 45 shares (LQ 45), and the ten-sectoral index. **Findings**. It was found that there was no association between Friday return and Monday return. Still, they occur a combination both Friday and Monday negative return was more than combination both Friday and Monday positive return. There are both combinations (Friday and Monday), and price fluctuation has not affected Monday's volume. There is also no difference in characteristics between groups: Friday and Monday negative return and Friday and Monday positive return. Thus, Friday-Monday dances with harmony; the efficient market occurs.

1. Introduction

Weekend effects (one of the calendar anomalies), which refer to lower or negative Monday return than other days, have been a concern in many research. Seminal research Cross (1973) shows that the distribution of price changes on Friday and Monday, and the return relationship between these two days. Cross shows the index return increased on Friday, as much as 62%, while it was around 39.5% on Monday. This difference is significant. Cross shows the Monday and Friday relationship pattern as follows: if the Friday index rises (positive return), then the return of Monday also rises, found as much as 49% of the data. Whereas if the Friday index falls, and the return of Monday rises, found as much as 24% of the data. Cross also states that if the positive (negative) Friday index, then the average Monday return is more significant (smaller), showing the relationship between Friday and Monday. Olson et al. (2015) tested on the Monday effect. Whether it was influenced by previous returns (Friday)? By distinguishing between negative-Friday (dummy) returns and constants as coefficients for positive Friday return. Finally, Olson found negative Friday to be followed by a lower Monday return. We survey the literature, most research regarding the Monday effect was related to: (1); test whether there is a Monday effect, with the follow-up issue being (1.a) on what day is the most significant return or (1.b) on what day a negative / positive return is obtained; (2) knowing the opportunity for positive, or negative returns from each of these days, where the test is to use logit.

Attention to trading volume or liquidity is neglected from the above research, as confirmed by Batrinca et al., (2018b): there is minimal emphasis on the calendar effects on trading volume (p; 134). Further, they state: it is essential to first understand the finding on calendar effects and price returns and then connect them with the insight on the price-volume relation (p: 137). Kudryavtsev, (2017): while trading activity has been paid significantly less attention. Batrinca et al.'s research motivation provide a new bridge for research on the weekend effect's trading volume. How does the price change impact the weekend effect (Friday and Monday) on Monday's trading volume? Batrinca et al. emphasized the asymmetric price-volume relationship, where trading volume change (because the price goes up) is not the same as trading volume change (because the price goes down). Kudryavsev (2017) shows there is an impact if, in a few days, there is an increase in prices. Some investors suspect/hope that tomorrow the price will decline, thus encouraging the desire to sell; the next effect is the increase in trading volume (when price expectations fall) on that day.

Topics relating to the weekend effect has been widely researched, but very little is concerned with the specific relationship between Friday and Monday. Friday-Monday research is interesting because Monday has more information flow; it becomes the research motivation to determine this information's effect on trading volume. It is important because the flow of information is one of the bases for transaction decisions. Thus, firms can consider when the information will be released. For FSA (Financial Services Authority, OJK), as a regulator, it can be used as additional information to make policies so that the market becomes efficient. In previous research, Garfinkel (2009), Chen et al. (2015) distinguished between positive Friday returns and negative Friday returns, their impact on trading volume, while Olson et al. (2015), the impact on Monday returns.

Specifically, we look at Friday and Monday relationship, not as two separate days, and as the two days as a couple. What we do here, although referring to Cross, is different in its emphasis. At Cross, the research looked only at the associations between Friday and Monday. In this research, the focus is on the combination of (Friday and Monday) and the impact on Monday trading volume.

The contribution of this research is: firstly, provide a piece of new evidence for Cross testing; secondly, to look at the influence of the Friday-Monday pair on Monday trading; thirdly, regarding research topics, namely trading volume, as stated by Batrinca (2018), it is still rare, so this research provides new evidence and new testing methods. This research is in two separate research areas, namely: trading volume and day effects. Fourthly, additional testing concerning trading risks can be a door for further research. Thus the research question is: do Friday and Monday have an association pattern? Is there a combination of Friday and Monday affecting trading volume on Monday? We use the sectoral (aggregate) data, with the consideration of data for decision-making, which in this context is to determine the effect of Friday-Monday on a sector. Trading Volume data is proxies: value, volume, and frequency, while the return is proxies: open-close return. To determine the Friday-Monday association, we use the association test (χ^2, Chi-Square), Independent t-test for the (F^-, M^-), and (F^+, M^+), and regression, where the Friday-Monday combination (F, M) is stated in dummy variables as an explanatory variable.

The results obtained are; (i) there is no association between Friday and Monday; (ii) there is no difference between a bearish situation (Friday and Monday are negative return) and a bullish situation (Friday and Monday are positive return); (iii) there is no evidence that a high trading volume will follow a bullish situation. This result will be fascinating to further research, in line with there is potentially more information available for Monday's trading. With this result, it appears that the market is efficient, where there is no significant fluctuation in both price and volume. It is a good situation. It is necessary for policymakers to maintain the stock exchange's credibility; for firms and other stakeholders, this situation provides convenience regarding announcements, and the market accepts it legally. For investors, there is no evidence that Monday is followed by weakening, or vice versa, so that investment decisions can be based on rational or fundamental reasons. This situation can later be compared with the pandemic (2020 data) time as a robustness data/test.

1.1 Trading Volume-Weekend Effect Researches

Research regarding the relationship between trading volume and price generally refers to whether the trading volume can predict prices. Chong & Wu (2019) examined the relationship between unusual trading volume and earnings surprises in the Chinese Capital Market. Chong & Wu's research results for the Chinese Market differ from the USA Market. There is a positive relationship between high-volume premium returns in the USA market, while it does not happen in China. Pathirawasam (2011) examined the relationship between volume-prices in the Colombo Capital Market. Two things were examined, namely: (i) the relationship between price-volume; (ii) as well as the ability of past trading volumes to predict future stock returns. This second analysis shows the trading volume having 'information content.' A positive relationship was found between both current trading volume and expected return; that is, a portfolio with an active trading volume having a high expected return in the same period; but found a negative relationship between past-trading volume and current expected return, i.e., an active trading volume in the previous period will get a lower expected return. Chen et al. (2015) examined the divergence of opinions and their impact on unexpected trading volumes, as well as stock returns, and the unexpected trading volume is caused by opinion divergence. They show the effect of return on the unexpected trading volume and follow Karpoff; returns are divided into returns (+) and absolute-negative returns as each variable. Garfinkel (2009) also differentiates returns (+) and return (-) as factors that influence trading volume. Both studies show the effect of return on trading volume. Qian & Qiu (2016) show that both return and volume have information content to predict others, and there is a stable relationship between return and volume on the Chinese Capital Market. Tang et al. (2013) examine whether the trading volume can predict stock prices for the Australian market by differentiating the company size. In the group of small companies with low trading volume and long periods, it was found the highest return. Nevertheless, in a short period, they found the group with a high trading volume has a greater return than the low trading volume group. It means that price fluctuations will follow the magnitude of trade transactions simultaneously (short term). About transactions, the explanation is through financial behavior, primarily concerning overconfidence or disposition effect, Zaiane, (2013), Lee et al. (2016). Zaiane, quoting Statman (2006), overconfidence can arise because of investors' tendency to sell 'winners' earlier; maintain 'losses'; so that investors make transactions/trade asymmetrically between gainer and loser.

Batrinca et al. (2018) show a relation between return and trading volume where the relationship can be symmetrical or asymmetrical. Ahmad & Ali, (2016) examined various holiday categories (Secular, Islamic, and Christian holidays) on the Egyptian Exchange (EGX). The results of their study showed that there were differences in price changes between the holidays. Giudici & Hu, (2019) shows that the intraday trading volume pattern has a U-shape, in which transactions occur higher when open and close. This trading pattern occurs on all transaction days. Concerning returns, Friday's open-returns are the lowest, and Friday's close-return and Monday's close- return have an equivalent return. It means that the 'passion' of Monday trading is higher than Friday.

Kiymaz & Berument, (2003) shows that in three markets (Canada, USA, UK), trading volume was found on Monday (followed by Friday), lower than other days. Nevertheless, volatility (return) on Friday was found to be the highest, indicating a negative correlation with the amount of trading volume. Olson et al. (2015) show the effect of Friday return on Monday return. His research results show that if Friday-negative return will be followed by Monday-negative return, both in the small stocks and large stocks groups. (Mitra & Khan, 2014) in the Indian Stock Market, find Monday has the lowest return but has the highest volatility, and in some instances, also find Friday has the lowest return. This research is stated as a reverse of the weekend effect. It is indicated before the holidays, the transaction will increase due to the need for cash, especially in the small stocks, in the Capital Markets of Indonesia, Singapore, Hong Kong, Malaysia, and Taiwan (Sukor, 2013). After the holidays, there will be an increase in transactions and also returns. However, Sukor stated that the holiday could not be identified with Friday and Monday.

Tachiwou, (2010) research in the West Africa Capital Market, no Monday effect is found; instead, the lower return occurs in mid-week (Tuesday and Wednesday) and high return at the end of the week (Thursday and Friday). Winkelried & Iberico, (2018) examined the Latin America Market found that Monday returns were significantly negative, and Friday returns were significantly positive. Lim & Chia, (2016) found Monday's return to be lower than Friday's return on the Malaysian Market, while on the Thailand Market, Friday's return was the highest compared to other days. Berument & Dogan, (2012) shows that there is no relationship between return-volatility. Monday's return is always the lowest, and Friday's return is the highest. Monday also has the highest variant, and the lowest variant occurs on Friday.

1.2 Research Contribution

This study would like to examine the weekend effect but in terms of the trading volume. To our best knowledge, very little research on the weekend trading volume. We propose it as a research novelty. Second, we provide enrichment of evidence regarding the relationship between Friday and Monday. Referring to Cross, Monday's return pattern follows Friday's return. Olson et al. strengthened the evidence, where the Friday-negative return had a significant impact on Monday's return. Unlike Cross, which emphasizes on Monday following Friday, in this research, the emphasis is on a combination of Friday and Monday, both negative returns (F^-, M^-), D_0 and both positive returns (F^+, M^+), D_1.

Third, another contribution is the effect of the (F, M) relationship on Monday's trading volume. To our best knowledge, there has not been an emphasis on this relation (weekend effects). If Friday affects Monday, there will be a change in trading volume. It is the focus of research. For that matter, there are four possible combinations of Friday returns and Monday returns, namely: negative-negative (F^-, M^-), D_0; (F^+, M^+), D_1; (F^+, M^-); D_2, (F^-, M^+) D_3. If related to a psychological situation (financial behavior), then the trading volume can be influenced by this combination. Conceptually, when D_0, panic selling situations can occur, and the pressure to make a more significant transaction (cut loss). Conversely, when a favorable combination, there will be an effort to realize the capital gains. We hypothesize that the D_0; will be stronger than the D_1; contrary to what Zaiane stated. We call the D_0 a bearish and the D_1 as a bullish. Fourth, we also conducted robustness test to whether differences in perception also affect trading volume on Monday. For this, the difference in perception is defined as the deviation from Monday's price. As the height of the deviation, the higher the difference in perception, then the impact on trading volume. The advanced robustness test is a more detailed explanation for each combination (F, M) and price deviation (Monday). This is to find out whether there is a difference in the combination (F, M) with the deviation that occurs. The hypothesis is that there is a higher difference in perception in

D_0 and D_1 situations compared to the other two situations. Thus, it is expected that the multiplicative coefficient D_0-risk and D_1-risk are positive.

2. Research Method

2.1 Data Collection

This study was conducted for 2018-2019 data. The data used are the Indonesian Composite Index (ICI), Liquid 45 shares (LQ 45), and the ten-sectoral index. The Data are taken to calculate return and trading volume on Friday and Monday. Data used are open price, close price, highest price, lowest price, daily trading volume (value, volume, and frequency). We use the 2018-2020 data, divided into two periods, namely before Covid (2018-2019), for comparison with the 2020 data (Covid-19 pandemic period, January-September 2020). With the close year and the number of samples that are not much different, it is expected that an equivalent comparison can be obtained. At the time of writing, the pandemic situation has not ended; even the data used is not enough for one calendar year. We divide it into two periods, where the Covid situation is only intended as an additional test (robustness). For this reason, we do not combine data, but rather compare between the two periods. Another objective is to see the difference between the two periods by not combining the data.

2.2 Return and Volume Measurement

Return is measured in open-close (o-c) return; that is, the difference (relative) of the stock's close and open price on the same day. The best trading volume measure is the value, but there are two additional measurements, namely traded share (volume) and frequency. We use all three proxies. Concerning the relationship between Friday returns and Monday returns, we test with the Chi-Square (χ^2) method. Additional testing to prove a difference in trading volume between D_1 and D_0 is conducted by an independent t-test. Different tests were also carried out, with the average Monday prices of D_1 and D_0 for each sector. We also use the coefficient of variation (CV) for groups D_1 and D_0 for Monday price/volumes. We specifically look at both Friday and Monday positive returns (F^+, M^+); D_1; and both Friday and Monday negative returns (F^-, M^-); D_0. About risk (σ), we measure it with a range (high-low) price on Monday and scaled it by the open price. We did a robustness test by including risk as an explanatory variable and specifying each D's risk.

2.3 The Model

The model is intended to show the relation (F, M) to Monday's trading volume. We use dummy, D_1=1; for both Friday and Monday returns are positive; (F^+, M^+); D_2=1 for combination Friday-positive return - Monday negative return; (F^+, M^-); D_3=1, for combination Friday-negative return - Monday positive return; (F^-, M^+). A constant for the bearish situation (F-, M-). If the constant is positive and bo> (b1; b2; b3), the amount of trade transactions is stronger in a bearish situation. We did a robustness test by including the price fluctuation variable as the explanatory variable. Another additional robustness test is to conduct a specification of each risk combination and D. It is expected that b8 has a positive coefficient; the coefficients of b9 and b10 are positive and greater than the coefficients of b_{11} and b_{12}.

$$(E(r)_{0-c}) = \frac{P_{t,c} - P_{t,o}}{P_{t,o}} \quad (1)$$

$$(Risk) = \frac{Ph - Pl}{Po} \quad (2)$$

$$TV_m = b_0 + b_1 D_1 + b_2 D_2 + b_3 D_3 + e_{it} \quad (3)$$

$$TV_m = b_4 + b_5 D_1 + b_6 D_2 + b_7 D_3 + b_8 Risk_m + e_{it} \quad (4)$$

$$TV_m = b_4 + b_5 D_1 + b_6 D_2 + b_7 D_3 + b_9 D_0 * Risk_m + b_{10} D_1 * Risk + b_{11} D_2 * Risk + b_{12} D_3 * Risk + e_{it} \quad (5)$$

3. Results and Discussions

3.1 Friday-Monday Relationship

The comparison between the D_0 and D_1 situation is presented in Table 1 to Table 3. Table 1 shows the relation between Friday's return and Monday's return. Except for the Miscellaneous Industry sector (for the 2018-2019 period), then (χ^2) is not significant, which means no association between Friday returns and Monday returns.

Table 1. The Association between Friday Return-Monday Return

Sector	Periods	E(r)$_{o-c}$			
		D_0 (%)	D_1 (%)	□□	Sign
Composite	2018-19	24.7	25.8	.02	0.88
	Covid-19(2020)	25.0	15.6	1.01	0.31
LQ 45	2018-19	24.7	27	.22	0.64
	Covid (2020)	21.9	15.6	1.6	0.20
Agriculture	2018-19	30.3	28.1	2.56	0.11
	Covid (2020)	34.4	21.9	0.40	0.72
Basic Ind	2018-19	25.8	16.9	2.01	0.16
	Covid (2020)	25.0	15.6	1	0.47
Consumer Goods	2018-19	29.2	20.2	0.01	0.93
	Covid (2020)	25.0	21.9	0.13	1.00
Finance	2018-19	20.2	30.3	0	0.98
	Covid (2020)	31.3	15.6	.21	0.73
Infrastructure	2018-19	24.7	21.3	0.35	0.55
	Covid (2020)	31.3	25	1.24	0.45
Manufacture	2018-19	27.0	21.3	0.01	1.00
	Covid (2020)	34.4	18.8	0.08	1.00
Mining	2018-19	21.3	21.3	1.90	0.17
	Covid (2020)	31.3	18.8	0	1.00
Miscellaneous	2018-19	28.1	10.1	5.83	.02**
	Covid (2020)	34.4	15.6	0.01	1.00
Property	2018-19	36.0	19.1	0.51	0.48
	Covid (2020)	37.5	18.8	0.92	0.44
Trade	2018-19	27.0	21.3	0.12	0.83
	Covid (2020)	31.3	18.8	0.01	1.00

** =significant at α= 5%

There is no association; it indicates no return pattern, that Friday returns are the benchmark for Monday returns. Also results, it appears that the "bearish" (D_0) is more dominant than the "bullish combination" (D_1), and the situation 100% for the covid-19 era. Compared to Cross's research results, the percentage of D_1 in our result (21%) is much lower than that of Cross Research (D_1 = 49%). These results may not be directly comparable, given that the timing of events is too far away. However, the results do not have a special relationship between Friday and Monday; it can be used as a benchmark, that the market moves randomly. It is suitable for investors in making investment decisions, where the potential gain on Monday is always open, even though the situation on Friday, there is a loss (negative). It also indicates an efficient market situation.

Table 2. Independent Test for D_o and D_1 (CC)

Indices	Value (IDR T)			Frequency (000 x)			Volume (mio shares)			Price (IDR)		
	Mean (D_0)	Mean (D_1)	p-value	Mean (D_0)	Mean (D_1)	p-value	Mean (D_0)	Mean (D_1)	p-value	Mean (D_0)	Mean (D_1)	p-value
CI	7.85	1.36	.30	402	396	.87	12942	12658	.80	644	803	.22
	7.32	8.81	.28	547	659	.29	7802	10630	.13	961	836	.30
LQ 45	4.22	4.68	.08***	164	185	.04**	1891	2078	.61	2810	2700	.70
	5.34	6.47	.36	274	314	.47	1900	2772	.14	2822	2467	.19
Agri	.12	.14	.18	7.3	11.7	.00*	138	216	.00*	892	747	.02**
	.10	.14	.36	9.9	18.9	.09***	166	344	.18	602	509	.20
Basic	.76	.74	.91	44.4	43.7	.842	598	451	.40	1343	1701	.01**
	.60	.49	.54	42	51	.27	423	461	.75	1427	1170	.38
Cons	.70	.60	.38	34.5	29.2	.17	726	683	.69	1128	1132	.98
	.70	.60	.43	44.7	57.2	.22	309	373	.49	2319	1882	.09***
Fin	1.87	1.90	.82	49	52	.34	946	760	.09***	2230	2620	.06***
	2.59	3.03	.43	93.6	128.6	.24	1088	1517	.14	2701	1954	.14
Infra	.99	.99	.96	48.	59.	.01*	130	15.2	.44	923	851	.52
	.92	1.14	.17	97	103	.74	970	1390	.13	1468	1379	.76
Manuf	1.75	1.82	.55	1.57	1.48	.52	97.65	84.97	.29	1169	1367	.14
	1.81	1.65	.58	101	85	.62	1169	1196	.89	1598	1386	.29
Mini	.68	1.09	.01**	45.0	61.9	.00*	1370	1660	.33	636	708	.43
	.64	.70	.64	59	74	.12	1206	1415	.38	570	507	.49
Misc	.38	.34	.55	24.5	2.9	.521	360	232	.24	1361	1500	.51
	.60	.32	.03**	28	19.6	.04**	405	252	.04**	1468	1379	.76
Prop	.90	.90	.99	5.3	56.8	.15	2735	3150	.38	325	305	.49
	.40	.60	.04**	57.0	80	.04**	2525	2200	.87	290	309	.69
Trade	1.30	1.31	.92	68.3	91.41	.01*	1397	1566	.56	435	433	.97
	.79	.94	.30	90	91	.09***	1287	797	.01*	646	490	.20
Average	1.79	2.07	2018-19	78.2	84.1	2018-19	1828	1844	2018-19	1158	1239	2018-19
	1.82	2.07	2020	12.3	14.1	2020	1604	1946	2020	1406	1189	2020
	1.81	2.07	All	99.3	112.1	All	1716	1895	All	1282	1214	All

Information: First row (2018-2019); second row (covid-19 era)
* significant at α = 1%; ** significant at α = 5%; *** significant at α = 10%;

Concerning various proxies of liquidity and price variables in the conditions of D_0 and D_1 are presented in Table 2. The independent t-test, mostly insignificant, shows that these variables are not different in the situation of D_0 and D_1. In the LQ 45 Index, the D_0-average price is higher than the D_1, but the liquidity (for all proxies) is lower, even though only on the frequency the difference is significant. Thus, at LQ 45, a negative relationship signal occurs between the transaction and the price situation. It could be an indication that, at the time of D_0, the price level had risen high, and investors were postponing their transactions. The effort to refrain from investing can be explained by the concept of the disposition effect proposed by Lee et al., where 'buying investors' are hesitant to enter the market, and according to Zaiane, investors who lose refrain from making transactions (maintain losses).

On the composite index, in 2018-2019 data; it is found, at D_0-average price is lower than D_1, with lower trading value, but the number of shares traded, and the frequency of trading is high. It indicates the market situation as a whole, where retail investors make a transaction on cheap (low price) stocks. This situation is more indicative of the role of individual investors and or small investors and the market situation outside LQ 45. Of these two situations, it should be assumed that large investors transact at LQ 45 shares and tend to reduce their transactions during D_0. Retail investors, the opposite happens, transact in other LQ 45 shares, by buying at a small value, and on cheap (low price) stocks. This difference in investors' types can be an exciting study further, but outside this research area. It shows the association (χ^2) between the Friday return-Monday return (F-M) pairs. There are four pairs, namely (F - M-) as D_0, (F + -M +), as D_1, and two others. Association test is carried out for two sides.

Table 3. Coefficient Variation for Several Sectors

Sector	Periods	P-average		Deviation		CV	
		D_0	D_1	D_0	D_1	D_0	D_1
Composite	2018-2019	644	803	154	5651	0.23	0.70
	Covid-19 era	961	836	236	50	0.25	0.06
LQ 45	2018-2019	2,81	2,71	918	996	0.32	0.36
	Covid-19 era	2822	2458	289	506	0.10	0.21
Agriculture	2018-2019	892	747	189	242	0.21	0.32
	Covid-19 era	602	509	156	118	0.26	0.29
Basic Industry	2018-2019	1343	1701	372	458	0.28	0.27
	Covid-19 era	1427	1170	553	361	0.39	0.31
Consumer Goods	2018-2019	1199	1123	691	487	0.58	0.43
	Covid-19 era	2319	1882	359	567	0.16	0.30
Finance	2018-2019	2231	2838	798	1170	0.36	0.41
	Covid-19 era	2701	1954	958	312	0.16	0.35
Infrastructure	2018-2019	924	851	355	360	0.42	0.38
	Covid-19 era	1021	920	230	339	0.23	0.37
Manufacture	2018-2019	1201	1383	344	467	0,29	0,34
	Covid-19 era	1598	1386	415	202	0.26	0.15
Mining	2018-2019	636	708	307	242	0.48	0.34
	Covid-19 era	571	507	199	127	0.35	0.25
Miscellaneous Industry	2018-2019	1361	1500	559	443	0.41	0.30
	Covid-19 era	1379	1468	529	510	0.38	0.35
Property	2018-2019	312	321	121	96	0.39	0.30
	Covid-19 era	290	309	99	60	0.34	0.19
Trade	2018-2019	475	410	233	192	0,49	0,47
	Covid-19 era	646	490	270	109	0.42	0.22
Average	All	1265	1208	389	586	0.32	0.32
	2018-2019	1169	1258	420	900	0.37	0.39
	Covid era	1361	1157	358	272	0.28	0.25

For the Covid-19 era, at CI and LQ 45 and several other indexes, the average price (D_0) is higher than D_1. The most interesting thing, for CI and LQ 45, is that the average D_0 prices in the covid-19 era were higher than Do in 2018-2019. This shows that even though a decrease in CI marked the Covid-19 era, a bearish situation (D_0) shows the highest average price. If the disposition effect explains it, it seems that this situation is appropriate.

Table 3 shows that the coefficient deviation (CV) for the periods is around 32% and is not significantly different between the D_0 and D_1 situations. It shows that the relative fluctuation rates of the two situations are the same. For the 2018-2019 data, the mean price and deviation of D_1 are higher than the D_0. However, in the Covid-19 situation, the result shows the opposite. It shows partially, for the period 2018-2019, the market situation in the D_1 is more active than the D_0, although it is not significantly different. When referring to Zianne, investors are more likely to sell stocks with potential gain and hold stocks with potential losses. Situation D_1 (the market is moving upwards) is also the same, showing investors have many choices and views of the situation to make transactions and manifest at a greater price and deviation. No difference coefficient variation between D_0 and D_1 confirms what happened in Table 1.

3.2 The Impact of Friday-Monday Returns on Monday Trading Volume

In particular, we would like to examine the impact of Friday and Monday returns on Monday's trading volume. We use the Cross concept (1975) concerning trading volume, tested through regression, and presented in Table 4. The first test is concerning trading volume, while the second and third test deals with robustness test, with the risk variable. Coefficient of D_0 (F-, M-); indicated by a constant, and must be positive. If the coefficient of b_1 is positive, then the D_1 situation is followed by an increase in trading volume. The coefficient b_4 must also be positive, and if the coefficient b_8 is positive, then increasing risk (price fluctuation) will be followed by increasing trading volume.

Table 4 show that all constants are positive and significant, according to expectations. The coefficient D_1 is more positive but mostly insignificant for all liquidity proxies (value, share, frequency). It indicates, even though in the D_1 situation, there will be additional transactions, the additional transactions are not significant. The D_2 coefficient is equivalent to the D_1 coefficient, while the D_3 coefficient is negative. In general, there is no difference in the liquidity of various combination opportunities (F, M). No Monday-trading anomaly.

Regression was carried out for 2018-2019, with the dependent variable being Trading Volume. Meanwhile, the explanatory variable is a combination dummy variable (F, M) with (F-, M-) as a constant.

Table 4. Regression results for Liquidity Against D (2018-2019)

Ind	Var	Value (IDR Trillion)					Volume (Shares Million)					Frequency (000)				
		B	beta	sign	R^2	F	B	Beta	sign	R^2	F	B	beta	sign	R^2	F
Composite Index	C	7.86		.00*	.04	1.28	12942		.00*	.05	1.53	418		.00*	.05	1.5
	D_1	2.50	.19	.15			-284	-.03	.80			27	.15	.24		
	D_2	.18	.01	.92			-476	-.05	.68			-19	-.10	.43		
	D_3	-.60	-.05	.73			-2048	-.25	.06***			-11	-.06	.64		
LQ 45	C	4.22		.00*	.06	1.8	1891		.00*	.05	1.6	164		.00*	.07	2.1
	D_1	.470	.21	.11			188	.08	.54			21	.26	.05**		
	D_2	.162	.06	.62			251	.09	.46			4.0	.04	.74		
	D_3	-.162	-.07	.57			-341	-.15	.25			-2.6	-.03	.81		
Agriculture	C	.123		.00*	.026	.77	138		.00*	.14	4.63	7.3		.00*	.13	4.4
	D_1	.021	.156	.22			78.4	.32	.01*			4.5	.40	.00*		
	D_2	.019	.14	.27			92.4	.35	.00*			3.3.	.27	.02**		
	D_3	.023	.15	.23			6.5	.02	.84			1.3	.10	.39		
Basic Industry	C	76		.00*	.014	.40	598		.00*	.02	2.2	44.4		.00*	.07	2.2
	D_1	-.03	-.02	.88			-147	-.14	.26			-.68	-.02	.89		
	D_2	-.03	-.03	.83			-32	-.04	.78			-9.9	-.3	.03**		
	D_3	-.14	-.13	.32			-100	-.12	.36			-.46	-.01	.91		
Consumption	C	.73		.00*	.01	.59	710		.00*	.04	1.07	34.4		.00*	.02	.53
	D_1	-.05	-.08	.51			-1.8	-.00	.99			-3.8	-.14	.26		
	D_2	-.04	-.07	.06***			244	.19	.13			-1.7	-.06	.62		
	D_3	-.09	-.17	.19			-1.3	-.01	.94			-.07	-.00	.98		
Finance	C	1.876		.16	.029	.839	946		.00*	.01	.19	49		.00*	.03	.84
	D_1	2.032	.166	.24			52	.033	.82			3	.158	.27		
	D_2	.094	.007	.96			89	.051	.71			4	.148	.28		
	D_3	-.162	-.01	.93			-69	-.04	.77			.19	.007	.96		
Infrastructure	C	.996		.00*	.01	.12	1296		.00*	.012	.33	48		.00*	.09	2.8
	D_1	.003	.004	.97			206	.104	.43			11	.316	.01*		
	D_2	.039	.058	.66			232	.115	.38			8.9	.245	.05**		
	D_3	-.024	-.04	.76			110	.064	.64			9.7	.316	.02**		
Manufacture	C	1.75		.00*	.01	.73	1.57			.03	.70	98		.00*	.02	.70
	D_1	.07	.05	.71			-96	-.5	.67			-13	-.15	.15		
	D_2	.11	.08	.59			217	.11	.39			3.8	.41	.75		
	D_3	-.03	.16	-.02**			177	.11	.41			-2.8	-.04	.78		
Mining	C	.68		.00*	.14	4.51	137		.00*	.011	.32	45		.00*	.12	4.91
	D_1	.42	.43	.00*			290	.13	.36			16.9	.46	.01*		
	D_2	.11	.13	.33			84.1	.04	.78			5.5	.16	.21		
	D_3	.08	.09	.08***			8.2	.04	.78			3.9	.12	.12		
Miscellaneous	C	.38		.00*	.01	.13	360		.00*	.02	.68	24.5		.00*	.01	.23
	D_1	-.04	-.07	.57			-128	-.13	.27			-3.6	-.08	.50		
	D_2	.00	.00	.97			15	.02	.87			-1.7	-.05	.67		
	D_3	-.01	-.02	.88			-60	.-.01	.45			-2.5	-.09	.48		

Ind	Var	Value (IDR Trillion)					Volume (Shares Million)					Frequency (000)				
Property	C	.89		.00*	.02	.64	2736		.00*	.07	.20	5.3		.00*	.00	1.9
	D_1	.01	.01	.98			415	.12	.30			6.4	.18	.13		
	D_2	.06	.06	.73			217	.07	.56			4.3	.13	.30		
	D_3	-.19	-.19	-.13			-599	-.2	.12			-3.6	.-01	.28		
Trade	C	1.37		.00*	.02	.20	3.92			.01	.20	75		.00*	.11	3.4
	D_1	.07	.06	.65			128	.02	.86			40	.36	.00*		
	D_2	.01	.00	.97			49	.01	.94			1	.01	.94		
	D_3	-.14	-.13	.33			.9	-.07	.59			13	.12	.32		

The symbols *, **, *** indicate significance at a = 1%; a= 5%; a = 10%.

These results indicate an increase in prices, not followed by a decrease in trading volume. Explanations can be given as follows: (i) price increases are considered normal so that investors continue to carry out transactions. Investors are aware, so they do not get caught in the race when prices rise. The investor's potential-capital gain/loss is determined by the transaction volume, so the investor does a transaction with care about value. In the case stated by Lee et al. (2016) and Zaiane (2013), there are differences in explanation. Lee et al. and Zaiane explain that investors tend to sell stocks (which gain) and hold (those that lose). In this situation, the combination (F+, M+) is followed by an additional transaction because of (i) the expectation of an increase, the continuation of the situation (expectation); (ii) the perception of buying at a high price, selling at a higher price (iii) speculators and investors enter the market at the same time. The speculator enters the market with the short-term goal, exit at a higher price, while investors enter the market with a long-term goal, hoping that this increase will occur. In this case, investor behavior cannot be interpreted as (iv) the winner's curse. If generalized, this situation shows that there tends to be an increase in transactions in the market with a bullish condition. This is good news, where panic selling (in bearish conditions) does not occur.

These results indicate that trading volume does not differ in various relations (M, F). If this pattern is correct, then the hypothesis that there is no panic selling is more dominant than the argument that "hold" or "realized gain," as stated earlier (Lee et al., 2016). Several explanations are: (i) retail investors; with a low wealth value, the potential loss is considered to be heavier than the potential gain; (ii) investing on a short horizon; so that the potential for the price to fall should be 'cut-loss'; (iii) better risk management; by applying a lower bound; (iv) do not immediately realize the "gain" because a hope; there will still be an increase continuously. If this explanation (iv) is accepted, it means that there is a "pattern of expectations" that is, if the price falls, it is suspected that the potential to fall again; and if the price goes up, it is expected that there will be a potential to go up again. It will create a cut-loss transaction and reduce realized gain. If this happens, this expectation pattern can be subjective, but it can be based on existing information. For this fourth reason; then the following steps can be taken: (i) negative information should be followed by positive information so that the potential for transactions will decrease; (ii) should supply the information on holidays (Saturday-Sunday) so that the potential for Monday increases. Our conclusion is Friday-Monday dance with harmony: no-difference result among combination (Friday-Monday).

3.3 Robustness Test

We conducted additional tests to determine the impact of price fluctuations on trading volume (Value) on Monday. Price fluctuations indicate disagreement between investors, so it should positively impact. Furthermore, we performed the test more specifically, dividing each pair's deviation (F, M).

Table 5. Regression Results Liquidity Against D and Risk (2018-2019)

Ind	Var	Value (Rp Trillion)					Value (Rp Trillion)					Value (Rp Trillion)				
		B	beta	sign	R^2	F	B	Beta	sign	R^2	F	B	beta	sign	R^2	F
Composite Index	C	7.86		.00*			8.26		.00*			7.76		.03**		
	D_1	2.50	.19	.15			2.41	.18	.18			2.57	.19	.58		
	D_2	.18	.01	.92	.04	1.28	.16	.01	.93	.04	.97	.78	.06	.86		
	D_3	-.60	-.05	.73			-.51	-.04	.77			.23	.02	.96		
	R						-39.44	-.03	.77						.04	.54
	$R*D_0$											9.96	.01	.98		
	$R*D_1$											3.36	.00	.99		
	$R*D_2$											-51.17	-.04	.83		
	$R*D_3$											-58.36	-.06	.82		
LQ 45	C	4.22		.00*			4.25		.00*			3.66		.00*		
	D_1	.47	.21	.11	.06	1.82	.47	.21	.12			.86	.38	.24		
	D_2	.16	.06	.62			.16	.06	.62	.06	1.35	.92	.35	.20		
	D_3	-.16	-.07	.57			-.16	-.07	.59			.85	.39	.27		
	R						-1.79	-.01	.92						.09	1.12
	$R*D_0$											44.88	.27	.25		
	$R*D_1$											15.57	.09	.69		
	$R*D_2$											-14.67	-.09	.63		
	$R*D_3$											-29.82	-.22	.39		
Agriculture	C	.12		.00*			.09		.00*			.16		.00*		
	D_1	.02	.16	.22	.03	.77	.02	.14	.25			-.06	-.43	.19		
	D_2	.02	.14	.27			.02	.12	.39	.08	1.73	-.07	-.52	.08***		
	D_3	.02	.15	.23			.02	.16	.20			-.02	-.16	.73		
	R						2.02	.23	.04**						.14	1.86
	$R*D_0$											-2.26	-.28	.28		
	$R*D_1$											2.83	.377	.09***		
	$R*D_2$											3.61	.500	.01*		
	$R*D_3$											.92	.090	.82		
Basic Industry	C	76		.00*			.79		.00*			.80		.00*		
	D_1	-.03	-.02	.88	.01	.40	-.20	-.15	.24			-.26	-.20	.49		
	D_2	-.03	-.03	.83			-.22	-.19	.15	.04	.87	-.18	-.16	.60		
	D_3	-.14	-.13	.32			-.22	-.20	.13			-.22	-.21	.47		
	R						4.25	-.07	.53						.04	.49
	$R*D_0$											4.04	.06	.77		
	$R*D_1$											9.12	.09	.68		
	$R*D_2$											1.66	.02	.92		
	$R*D_3$											4.41	.09	.66		
Consumption	C	.73		.00*			.60		.00*			.48		.00*		
	D_1	-.05	-.08	.51	.01	.59	-.04	-.06	.60			.05	.07	.81		
	D_2	-.04	-.07	.06***			-.07	-.12	.35	.09	2.01	.15	.24	.38	.11	1.46
	D_3	-.09	-.17	.19			-.10	-.18	.14			.02	.03	.92		
	R						8.81	.27	.02**							

Ind	Var	Value (Rp Trillion)					Value (Rp Trillion)					Value (Rp Trillion)				
	R*D0											16.57	.53	.02**		
	R*D1											11.22	.28	.28		
	R*D2											3.50	.13	.56		
	R*D3											8.82	.28	.29		
Finance	C						1.943		.28			1.187		.75		
	D1						2.031	.166	.25			3.880	.317	.39		
	D2						.097	.007	.96	.03	.6	.692	.051	.87		
	D3						-.153	-.012	.93			.050	.004	.99		
	R						-5.54	-.006	.96						.03	.39
	R*D0											57.446	.054	.84		
	R*D1											-98.71	-.11	.62		
	R*D2											7.177	.008	.96		
	R*D3											35.097	.041	.89		
Infrastructure	C						.920		.00*			.995		.00*		
	D1						.014	.021	.87			.015	.023	.95		
	D2						.033	.049	.71	.02	.43	-.146	-.22	.51		
	D3						-.023	-.041	.76			-.086	-.15	.69		
	R						4.634	.116	.29						.03	.39
	R*D0											.088	.003	.99		
	R*D1											-.786	-.02	.95		
	R*D2											10.502	.31	.17		
	R*D3											3.915	.123	.63		
Manufacture	C	1.75		.00*			1.78		.00*			1.42		.00*		
	D1	.07	.05	.71	.01	.73	.06	.04	.75			.16	.12	.78		
	D2	.11	.08	.59			.11	.07	.56	.01	.20	.59	.39	.22		
	D3	-.03	.16	-.02**			-.03	-.02	.87			.60	.49	.20		
	R						-2.50	-.02	.83						.04	.47
	R*D0											22.91	.27	.31		
	R*D1											2.60	.17	.62		
	R*D2											-1.40	-.11	.62		
	R*D3											-2.00	-.27	.31		
Mining	C	.68		.00*			.54		.00*			.61		.00*		
	D1	.42	.43	.00*	.14	4.51	.40	.41	.00*			-.04	-.04	.91		
	D2	.11	.13	.33			.12	.14	.30	.16	4.12	.07	.07	.80		
	D3	.08	.09	.08***			.06	.07	.60			.10	.11	.72		
	R						8.31	.17	.11						.20	2.81
	R*D0											3.81	.07	.73		
	R*D1											28.94	.57	.03**		
	R*D2											7.15	.15	.45		
	R*D3											2.41	.06	.79		
Miscellaneous	C	.38		.00*			.38		.00*			.27		.00*		
	D1	-.04	-.07	.57	.01	.13	-.01	-.01	.92			.43	.81	.01*		
	D2	.00	.00	.97			.03	.06	.62	.01	.10	.16	.42	.18		
	D3	-.01	-.02	.88			.01	.04	.78			.10	.29	.38		
	R						-.55	-.03	.80							
	R*D0											5.66	.31	.23		
	R*D1											-2.35	-.69	.01*		
	R*D2											-2.03	-.10	.63		
	R*D3											.72	.05	.81		
Property	C	.89		.00*	.02	.64	.76		.00*	.03	.53	.95		.01*	.04	.45
	D1	.01	.01	.98			.03	.22	.85			-.09	-.06	.89		

Ind	Var	Value (Rp Trillion)					Value (Rp Trillion)					Value (Rp Trillion)				
	D_2	.06	.06	.73			.07	.05	.69			-.51	-.36	.41		
	D_3	-.19	-.19	-.13			-.18	-.13	.29			-.44	-.31	.38		
	R						9.30	.08	.48							
	$R*D_0$											-4.39	-.06	.85		
	$R*D_1$											4.04	.04	.90		
	$R*D_2$											41.89	.37	.30		
	$R*D_3$											13.30	.17	.52		
Trade	C	1.37		.00*			1.21		.00*			1.38		.00*		
	D_1	.07	.06	.65			.11	.09	.49			-.10	-.09	.84		
	D_2	.01	.00	.97	.02	.20	.02	.02	.88	.04	.75	-.05	-.05	.92		
	D_3	-.14	-.13	.33			-.15	-.14	.29			-.53	-.49	.26		
	R						14.29	.11	.35						.04	.54
	$R*D_0$											-.65	-.01	.98		
	$R*D_1$											18.95	.15	.65		
	$R*D_2$											4.77	.05	.88		
	$R*D_3$											31.61	.38	.23		

The symbols *, **, *** indicate significance at a = 1%; a =5%; a = 10%.

The test results are shown in Table 5. For tests with fluctuations in general, negative coefficients were obtained for CI and LQ 45 and the Miscellaneous Industry and Manufacturing sectors. In other sectors, a positive coefficient is obtained. Only in the Agriculture and Consumption sectors obtained positive and significant coefficients. These results generally indicate that price fluctuations have not been proven to affect (increase) the existence of trading volume. In the additional test, the combination (F-, M-) and (F+, M+) should give higher fluctuations, so the expected coefficients of b_9 and b_{10} are positive and significant, compared to b_{11} and b_{12}. The results show that the coefficients of b_9, b_{10}, 9 of 12 positive regressions (75%), while the coefficients of b_{11} and b_{12} are 7 and 8 regressions.

However, most results are not significant, except for coefficient b_9 for the consumption sector, the coefficient of b_{10} for the agriculture and mining sectors, and the coefficient of b_{11} for the agriculture sector. This result can be explained as follows: in general, there is no relationship between Friday, Monday, indicating the amount of data distribution is evenly distributed. Thus, no unique pair (F, M) will appear. The next impact is that the price changes between the pairs are no different. This situation causes price fluctuations not to affect trading volume.

Regression is carried out for 2018-2019, with the dependent variable being Trading Volume (Value), while the Explanatory Variable is the Dummy variable, as well as risk (middle), and the specifications of D-risk. The variable risk coefficient (R) is expected to be positive, as is D-risk's specification coefficient.

4. Conclusions

The research results concluded that no pattern occurs concerning the Friday-Monday relationship; there is no difference in Monday returns for groups (F^-, M^-) and (F^+, M^+); there is no impact on Monday fluctuation on Monday's liquidity. In general, it can be concluded that there was no market anomaly on Monday. Investors can make transactions on Monday, with the same potential risk-return.

Some further research suggestions that can be given are as follows: first; It is assumed that large investors transact at LQ 45 and tend to reduce their transactions at Do; the opposite happens to retail investors, transacting in other than LQ 45 by buying at a small value, and in cheap/low price stocks. The different types of investors can be further research. Second; This research is based on day (F, M), where the period of this relationship can be extended to weekly, monthly, and its impact on trading volume. Third, studies with specific samples, such as the most considerable profit or loss group, are the most active trading groups.

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