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Abstract:

The major objective of this research is to examine the effect of macroeconomic surprises factors on stock return intervening by market liquidity and earnings surprises; this research focused in the financial sector firms in Indonesia Stock Exchange, the study's period from 2012 to 2016 and using purposive sampling for 59 company. The data was analyzed using software AMOS 24 and SPSS 24 with technique Path Analysis. The study's found out that surprises money supplies significant effect to earnings surprises and market liquidity effect to stock return. The findings can help the decision makers or financial managers to consider implement money supply, earnings surprises and market liquidity to increase stock return.

Keywords: macroeconomic factors, market liquidity, earnings surprises; stock return.

JEL Classification: E4; E5; G11; P31; G1; G14.

Introduction

Changes in the global economic constellation since 2008 crisis continued to decline in line with the impact of the crisis in developed countries which slowed to 3.2%, lower than 2011 at 3.9% and still continued until 2016 at 3.1%, deteriorating growth. The economy in developed countries is mainly due to the economic performance of European countries which are still faced with debt problems, fiscal contraction, limited monetary policy space, sharply increasing unemployment rate, fragile financial sector, and declining market confidence. All these problems form a circle of problems (vicious circle) which causes the recovery of the European crisis to run slowly. The sluggish economy in developed countries began to impact slowing economic growth at emerging market countries (Indonesian economy report: 2012-2016).

High uncertainty and risk perceptions also encourage global investors to transfer investments to financial instruments that are considered to be safer and more liquid (flight to quality). This condition is caused by market-wide volatility (Acharya and Pedersen (2005), Ericsson and Renault (2006), such as government bonds and US dollars the crisis in developed countries has resulted in tight liquidity and falling prices of global financial assets due to the liquidity effects of reducing short-term interbank deposit rates such as the Federal Funds Rate in US and short-term government bond yields, Cochrane (1989), Gordon and Leeper (2006), Christiano and Eichenbaum (1995), Christiano and Eichenbaum (1992a), Bernanke and Mihov (1998), or Judson and Klee (2010).

1. Literature review

Efficient hypothesis market (EHM)

A fundamental principle of efficient markets is that any new information ought to be reflected in stock prices very rapidly. The father of the efficient market hypothesis, Eugene F. Fama, of the University of Chicago, has earned on 14th October 2013 the Nobel Prize in economics assumes that stock prices are influenced by both fundamental and non-fundamental information. A liquid stock market is considered by Fama (1997, 1981) as efficient when it absorbs very quickly and accurately all important unexpected information. The market price of stocks on the liquid market is of the correct value, stocks are usually correctly priced and it is practically impossible to find undervalued or overvalued stock titles on the market. The term efficient is used in the sense of ability to handle the unexpected information. Musilek (2013). Beaver (1986, 130) a security market is said to be efficient with respect to an information system if and only if the prices act as if everyone observes the signals from that information system".

Arbitrage pricing theory (APT)

Stephen Ross (1976) developed the arbitrage pricing theory (APT). Like the CAPM, the APT predicts a security market line linking expected returns to risk, but the path it takes to the SML is quite different. Ross's APT relies on three key propositions:

- security returns can be described by a factor model;
- there are sufficient securities to diversify away idiosyncratic risk;
- well-functioning security markets do not allow for the persistence of arbitrage opportunities.

We begin with a simple version of Ross's model, which assumes that only one systematic factor affects security returns. Once we understand how the model works, it will be much easier to see how it can be generalized to accommodate more than one factor.

Macroeconomics

Macroeconomics is the branch of economics that is concerned with overall ups and downs in the economy Krugman and Wells (2015, 67). Macroeconomics developed from the writings of the British economist John Maynard Keynes on the Great Depression of the 1920s and 1930s. Keynesians argued that state intervention on a macro-scale was necessary if capitalism was to be saved from self-destruction. They showed how the amplitude of business fluctuations could be reduced by macroeconomic policy and that higher long-term growth could be achieved as a result. Third, macroeconomics is a more controversial subject than microeconomics. There are disagreements about the role of monetary variables, the causes and cures of unemployment, and the effectiveness of fiscal policy. The reader must not expect to find a single 'right' answer to current macroeconomic problems. There are numerous schools of macroeconomic because macroeconomics is closely involved with government policy, political, social and economic objectives intermingle and can sometimes conflict. Controversy also arises because of the intrinsic complexity of the subject.

Ball and Lown (1968) find that the systematic earnings factors are correlated with four macroeconomic variables (real growth in industrial production, real GDP growth, the unemployment rate, and inflation). Surprises in the macroeconomic series that signal positive (negative) changes in economic activity should therefore lead to positive (negative) earnings revisions. Still, the results in Campbell (1991), Vuolteenaho (2002) and Kothari, Lewellen and Warner (2006) suggest that aggregate stock returns are primarily driven by discount rate shocks. This implies that the common earnings component, which is presumably driven by macroeconomic shocks, is rather small. Due to this mixed evidence regarding the influence of the macroeconomic on corporate earnings, it is an open question whether macroeconomic news in fact have a significant impact on market participants' earnings expectations.

Surprises

Chen *et al.* (1986), suggested that securities returns are significantly affected by unanticipated macroeconomic factors, in his research put forward four economic factors that significantly influence securities returns namely:

- 1) Unanticipated changes in the rate of inflation;
 - unanticipated changes in the index of industrial production;
 - unanticipated changes in yield spread between high-grade and low-grade corporate bonds;
 - unanticipated changes in the slope of the term structure of interest rate.

Surprises is actual value minus estimated or expected value as (Ehrmann and Fratzscher 2011) or Bodie *et al.* (2014, 457). Thus, if surprises macroeconomic factors are defined as actual macroeconomic factors minus

estimated macroeconomic factors, then there are three possibilities that can occur, namely the macroeconomic zero surplus factors, the negative value and the positive value. Surprises can be positive, but can also be negative. In general, surprises measurement is:

$$S_{k1} = A_{k1} - E_{k1} \quad (1)$$

where: S_{k1} - components of surprises; A_{k1} - actual data that was announced; E_{k1} - market estimates.

Using the surprise component of macroeconomic variables reduces concerns about endogeneity in the study (Gürkaynak, Levin and Swanson 2010). This is because feedback from the stock market to the macro economy (as reflected in the macroeconomic variables) is likely to be captured in the anticipated component of the macroeconomic data releases.

Market liquidity

Market liquidity as a market in which a large volume of trades can be immediately executed with minimum effect on price. In other words, the liquidity of the market can be recognized by how low the uncertainties of the execution prices Miller and Grossman (1988). The market for a stock is liquid if the following conditions hold:

- there are always bid and asked prices for the investor who wants to buy or sell small amounts of stock immediately;
- the difference between the bid and asked prices (the spread) is always small;
- an investor who is buying or selling a large amount of stock, in the absence of special information, can expect to do so over a long period of time at a price not very different, on average, from the current market price;
- an investor can buy or sell a large block of stock immediately, but at a premium or discount that depends on the size of the block.

The degree of information asymmetry between suppliers and demanders of liquidity determine market liquidity. Massimb and Phelps (1994) focus on the importance of immediacy. Liquidity can be defined as the "market ability to provide immediate execution for an incoming market order (often called "immediacy") and the ability to execute small market orders without large changes in the market price (often called "market depth" or "resiliency")."

Liquidity, a fundamental concept in finance the vast majority of equilibrium asset pricing models do not consider trading and thus ignore the time and cost of transforming cash into financial assets or vice versa. Recent financial crises, however, suggest that, at times, market conditions can be severe and liquidity can decline or even disappear. Such liquidity shocks are a potential channel through which asset prices are influenced by liquidity. Amihud and Mendelson (1986) and Jacoby, Fowler, and Gottesman (2000) provide theoretical arguments to show how liquidity impacts financial market prices.

Jones (2001) and Amihud (2002) show that liquidity predicts expected returns in the time-series. Pastor and Stambaugh (2001) find that expected stock returns are cross sectionally related to liquidity risk. Brunnermeier and Pedersen (2009). Through theoretical models, they also argue that the dynamics of market liquidity are related to market volatility. Liquidity also fluctuates significantly over time. During the financial crisis, the average bid/ask spread for stocks listed on the world's major exchanges increased dramatically, from around 3% in the first half of 2008 to 6 % in six months after the failure of Lehman Brothers in September 2008. Average spread peaked at more than 6.5 % in a period of great uncertainty ahead of the November 2008 Citibank rescue announcement, Beber and Pagano (2013)

Prior empirical research and motivation

Chen, Roll, and Ross (1986) examine the extent to which surprises in economic news pose systematic risk to the market. They find that certain macroeconomic announcement surprises influence expected stock returns. Pearce and Roley (1985) is one of the first studies to focus directly on the effects of unanticipated economic news. They find that changes in money supply only affect stock prices when their magnitude or direction is unanticipated. They also find that these market adjustments are complete by the morning of the trading day after the announcement. Fujimoto (2004) also discovered that monetary variables are significant drivers of securities market liquidity.

Kothari *et al.* (2006) conjecture that the surprising finding of a negative relation between aggregate earnings and stock returns might be because aggregate earnings growth contains news about changes in discount rates. Consistent with this conjecture, Hennessy, Levy and Whited (2007), Lewellen and Lewellen (2012). McQueen and Roley (1993), Funke and Matsuda (2006) also reexamine the relationship between macroeconomic news announcements and the prices of stock. This incorporates news about several variables and business conditions,

such as inflation and unemployment rate. The moment that the news is announced affects the volatilities and the return on the assets. Albuquerque and Vega (2009) conducted the same research for the Portuguese market and found similar results.

Castanias (1979) offers support for the hypothesis that economic news affects stock prices. This hypothesis originates from the theory that stock prices incorporate all relevant information. Assuming macroeconomic news is relevant information and that it often differs from expectations, macroeconomic releases should then affect stocks.

The use of earnings news first examined by Ball and Brown (1968) on the capital market shows that stock prices react to the shock of earnings news content. The other hand earnings surprises also have an impact on the future of cash flows, changes in company value and also leverage ratios. Shows that post-announcement drift earnings differ from price momentum. Based on the description of the background problem in this study is whether The primary objective of this research is to develop and test of the significance direct and indirect effect macroeconomic surprises on stock returns via market liquidity and earnings surprises

2. Methodology

Research methods

This study uses an explanatory design because it tests or confirms the relationship or influence between variables or constructs. Population the Indonesia Stock Exchange at companies registered in financial sector January 2012 to December 2016, as many as 59 companies were eligible to be sampled according to the purposive sampling technique. an analysis of structural equation model (SEM) with path analysis design

Concept and measurement variables

This study consists of exogenous variables (inflation surprises, exchange rate rupiah surprises, M2 surprises), endogenous (stock return), and intervening (market liquidity (Liq) dan surprises earnings (Eps)). Operational definition of variables from each of these variables as follows:

Stock return

Brigham *et al.* (2011, 219), return is the concept of return provides investors with a convenient way to express the financial performance of an investment. Jones (2000, 124) "return is yield and capital gain (loss). Corrado dan Jordan (2000, 5) said that "Return from investment security is cash flow and capital gain/loss". Or Income received on an investment plus any change in market price, usually expressed as a percent of the beginning market price of the investment. This definition of the Holding-Period Returns (HPR) treats the dividend as paid at the end of the holding period. When dividends are received earlier, the HPR should account for reinvestment income between the receipt of the payment and the end of the holding period. The percent return from dividends is called the dividend yield, and so dividend yield plus the rate of capital gains equals HPR. (Bodie *et al.* 2018, 126).

$$HPR = \text{Ending price of a share} - \text{Beginning price} + \text{Cash dividend} + \text{Beginning price} \quad (2)$$

The realized return, called the holding-period return.

Inflation

Inflation is defined as the tendency of prices to rise in general and continuously (Boediono 1982). The price increase of just one or two kinds of goods cannot be said as inflation unless the increase has an impact on price increases. Inflation Surprises (Surin) is the actual value of inflation ln_{it} minus the estimated inflation value (expected) lnY_t . ln_{it} inflation actual is the end of the current month, estimated inflation value (expected) model is using *autoregressive distributed lag* (ARDL) and logarithm, Mashilana and Hlalefang (2018):

$$lnY_t = \gamma_0 + \gamma_1 \log Y_{t-1} + \varepsilon_t \quad (3)$$

$$Surln = ln_{it} - lnY_t \quad (4)$$

where: Y_t = estimated inflation value, γ_0 = Constanta, $\gamma_1 \log Y_{t-1}$ = coefficient inflation. ε_t = error

Exchange rate

Aghion *et al.* (2009) argue that the volatility of the real exchange rate can have a significant impact on the level of long-term productivity growth, but the effect is very dependent on the level of financial development of a country. The exchange rate of a real currency is 'the price' of a country's currency against another foreign country, for example 'price' of one current US dollar (June 2, 2017, Rp. 13,371) or the current price of one Hong Kong Dollar

(HKD) June 2, 2017 is Rp. 1,719 and so on, which is clear if we talk about 'price' so that it is generally related to money, and currency exchange rate this money is stable and can be labile or too moving up or down. Surprises Exchange rate (Sumt) is the actual exchange rate nt_{t1} minus by the estimated exchange rate (expected) ntY_t . *Sumt* is Surprises exchange rate Rupiah/ US Dollar end period. Estimated of exchange rate value (expected) model is using *autoregressive distributed lag (ARDL)* and logarithm, Mashilana and Hlalefang (2018):

$$ntY_t = \beta_0 + \beta_1 \log nt_{t-1} + \varepsilon_t \tag{5}$$

$$Surmt = nt_{t1} - ntY_t \tag{6}$$

where: ntY_t = estimated of exchange rate value (expected); β_0 = Constanta; $\beta_1 \log Y_{t-1}$ = coefficient logarithm exchange rate; ε_t = error

Money supply

Money supply is the amount of money in circulation and the money supply consists of M1 and M2 Miller (2012). (M2) is used as a proxy for the money supply. The increase in the money supply causes an increase in liquidity which ultimately results in an upward movement of the nominal price of the stock. Mukherjee and Naka (1995), Maysami and Koh (2000) found a positive sign. Therefore, a positive relationship is expected between money supply and stock returns. Surprises money supply (Sum2) is the actual value of M2 $m2_{t1}$ minus by the estimated M2 (expected) $M2Y_t$. The M2 at the end of month estimate value (expected) model is using *autoregressive distributed lag (ARDL)* and logarithm, Mashilana and Hlalefang (2018).

$$M2Y_t = \alpha_0 + \alpha_1 \log Y_{t-1} + \varepsilon_t \tag{7}$$

$$Sum2 = m2_{t1} - M2Y_t \tag{8}$$

where: $M2Y_t$ = estimate value (expected) M2; α_0 = Constanta; $\alpha_1 \log Y_{t-1}$ = coefficient logarithm M2.

Earnings surprises

Surprises Earnings is a surprise profit, or unexpected income, in accounting is the difference between reported earnings and expected profits from an entity business. (Pinto, Jerald E.; Elaine Henry; Thomas R. Robinson; John D. Stowe (2010). formulation of Surprises Earnings by Pinto et al. (2010).

$$SUE = \frac{EPS_1 - EPS \text{ Forecast}}{\sigma (EPS_1 - EPS \text{ Forecast})} \tag{9}$$

where: SUE - Surprises earning; EPS - Earning actual; Forecast - Earning projections; σ - Standard deviation

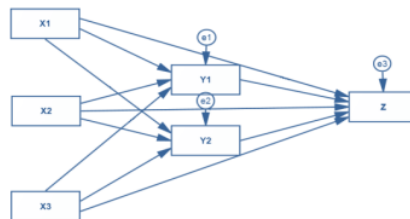
Market liquidity

Market Liquidity (Liq) The ability to trade assets in a short time at a low cost and with a small impact on prices or prices approaching consensus values Foucault, et al. (2013). Tobek (2016) argues that the arithmetic mean is more robust and that, therefore, his estimator will be less affected by variations in volatility, $L_n = \log \text{price}$ $H = \text{high price}$ $L = \text{low price}$

$$\frac{1}{2} \left[\ln \frac{H_t}{L_t} + \ln \frac{H_{t+1}}{L_{t+1}} \right] \tag{10}$$

Research path model

Figure 1. Research model



Research hypotheses

To develop solutions, the problem of research and achieve its objectives, the research was based on the formulation of the following hypotheses:

- H₁ : Surprises Inflation significant effect to market liquidity?
- H₂ : Surprises Inflation significant effect to earnings surprises?
- H₃ : Surprises money supply significant effect to market liquidity?
- H₄ : Surprises money supply significant effect to earnings surprises?
- H₅ : Surprises exchange rate significant effect to market liquidity?
- H₆ : Surprises exchange rate significant effect to earnings surprises?
- H₇ : Surprises Inflation significant effect to stock return?
- H₈ : Surprises money supply significant effect to stock return?
- H₉ : Surprises exchange rate significant effect to stock return?
- H₁₀ : Market liquidity significant effect to stock returns?
- H₁₁ : Earnings surprises significant effect to stock returns?

Analysis techniques

The data obtained were analyzed by Path Analysis using software (AMOS-Structure Equation Model) to explaining the direct and indirect consequences of a set of variables, as a causal variable, against a set of other variables which are consequent variables. Hair *et al.* (2010). The steps are as follows:

3. Results and Discussion

3.1. Descriptive analysis

Table 1. Descriptive of macroeconomic surprises factors

46 Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SurINF	60	-.2381			
SurM2	60	-.0304	.0216	.000003	.0116464
SurNT	60	-.1849	.2186	-.000003	.0440375
Valid N (listwise)	60				

Source: SPSS 24, 2019

From Table 1 above illustrates the average value of the three surprise variables is the same that is equal to -.000003, with the highest value is the inflation surprise variable of 4.4949 and the lowest of -.2381, with a level of deviation of .5955. While the second highest variable value is surprises exchange rate of .2186 and the lowest value of -.1849. And the third is the highest M2 surprise variable value of .0216, and the lowest value of -.0304.

Table 2. Descriptive of stock return

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
BFIN	60	-.9050	9.9717	.55267	2.333500
PADI	60	-.8252	4.8170	.14189	.762102
KREN	60	-.7963	4.2711	.10689	.582338
BBNI	60	-.2291	.1779	.01089	.080852
ADMF	60	-.3056	.2148	-.00520	.091669
CFIN	60	-.2062	.1739	-.00837	.058821
Valid N (listwise)	60				

Source: SPSS 24, 2019

The Table 2 above, illustrates the highest average stock returns found in 3 companies with the issuer code BFIN (.552669), PADI (.141891) and KREN (.106887) and the lowest average stock returns were in 3 ADMF companies (-.005199), CFIN (-.008371) and TRUS (-.019027), from 59 companies during the 60-month research period.

Table 3. Descriptive of market liquidity

	46 Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
BFIN	60	-.4373	.7920	.02001	.210682
KREN	60	-.3558	.6064	.01417	.104568
PADI	60	-.3888	.7111	.01324	.130954
BMRI	60	-.0823	.0780	.00148	.023070
INPC	60	-.2527	.1260	-.00181	.052230
BNLI	60	-.0807	.1599	-.00218	.030990
TRUS	60	-.3454	.1157	-.00865	.053306
Valid N (listwise)	60				

Source: SPSS 24, 2019

From Table 3. above illustrates the highest average market liquidity found in 3 companies with the issuer code BFIN (.020009), KREN (.014167) and PADI (.013237) and the lowest average market liquidity found in 3 companies with the issuer code INPC (-.001813), BNLI (-.002182) and TRUS (-.008648), from 59 companies during the 60-month research period.

Table 4. Descriptive of earnings surprises

	80 Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
RELI	60	-.0312	3.2659	1.11209	1.000000
AHAP	60	-.2418	4.9969	.59156	1.008439
BACA	60	-5.4346	2.0273	.00000	1.008439
MAYA	60	-1.6293	4.3607	.00000	1.008439
YULE	60	-4.1773	2.4707	.00000	1.008439
BDMN	60	-2.9950	4.7392	.00000	1.008439
LPGI	60	-4.8070	5.1145	-.00244	1.008439
Valid N (listwise)	60				

Source: SPSS 24, 2019

3.2. Results of coefficient regression weights

Hypothesis testing is applied to determine which variables are significantly influential. Testing Criteria: t-value statistics. The decision is to reject H_0 when the value of t is greater than t -table (1.96) and $P > 0.05$. Accept H_0 and Reject H_a means that there is no significant effect, on the other hand reject H_0 and accept H_a means that there is a significant effect.

Table 5. Result of hypothesis testing

H	Hypothesis	C.R.	P	Decision	Effect
H ₁ :	Surprises Inflation significant effect to market liquidity	-.094	.925	Rejected	Not Significant
H ₂ :	Surprises Inflation significant effect to earnings surprises	1.122	.262	Rejected	Not Significant
H ₃ :	Surprises money supply significant effect to market liquidity	-.992	.321	Rejected	Not Significant
H ₄ :	Surprises money supply significant effect to earnings surprises	2.794	.005	Accepted	Significant
H ₅ :	Surprises exchange rate significant effect to market liquidity	.772	.440	Rejected	Not Significant
H ₆ :	Surprises exchange rate significant effect to earnings surprises	1.076	.282	Rejected	Not Significant
H ₇ :	Surprises Inflation significant effect to stock return?	-.239	.811	Rejected	Not Significant
H ₈ :	Surprises money supply significant effect to stock return?	-1.053	.292	Rejected	Not Significant
H ₉ :	Surprises exchange rate significant effect to stock return?	-1.475	.140	Rejected	Not Significant
H ₁₀ :	Market liquidity significant effect to stock returns	-28.325	***	Accepted	Significant
H ₁₁ :	Earnings surprises significant effect to stock returns	1.327	.185	Rejected	Not Significant

3.3. Results of path model analysis

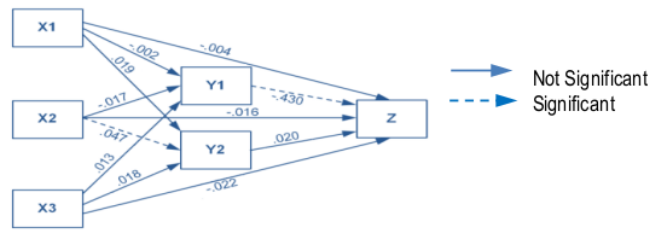
The results of the path analysis on the effects of exogenous variables partially on the endogenous variable for structural equation model are reported in below:

$$Y_1 = .003 + -.002 * \text{SurIn} - .017 * \text{SurM2} + .013 * \text{SurNT} + .003 \quad (11)$$

$$Y_2 = .029 + .019 * \text{SurIn} + .047 * \text{SurM2} + .018 * \text{SurNT} + 1.023 \quad (12)$$

$$Z = .034 - .004*SurIn - .016*SurM2 - .022*SurNT - .430*Marliq + .020*Eps + .105 \tag{13}$$

Figure 2. Coefficient path. Standardized regression estimate



The effects of exogenous variables partially on the endogenous variable which is presented in the Figure 2, in this study:

1. The first line (H1) states, that the Inflation surprises (X1) affect stock returns (Z) through market liquidity (Y1) and through earnings surprises (Y2)

1.1. Path $X_1 \rightarrow Y_1 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_1 \rightarrow Z$	-0.004	
Direct Effect	$X_1 \rightarrow Y_1$	0.002	
Direct Effect	$Y_1 \rightarrow Z$	-0.430	
Indirect Effect	$X_1 \rightarrow Y_1 \rightarrow Z$	$(0.002) * (-0.430) = 0.001$	
Total Effect = DE+IE		$0.001 + -0.004 = -0.003$	IE > DE

1.2. Path $X_1 \rightarrow Y_2 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_1 \rightarrow Z$	-0.004	
Direct Effect	$X_1 \rightarrow Y_2$	0.019	
Direct Effect	$Y_2 \rightarrow Z$	0.020	
Indirect Effect	$X_1 \rightarrow Y_2 \rightarrow Z$	$(0.019) * (0.020) = 0.000$	
Total Effect = DE+IE		$0.000 + -0.004 = -0.004$	IE > DE

Because DE surprises inflation for stock returns -0.004 are smaller than IE surprises inflation for stock returns through market liquidity 0.001 and IE surprises inflation for stock returns through earning surprises, it can be concluded that market liquidity (Y1) and earnings surprises (Y2) in this study are intervening variables because both of these pathways have added influence through the indirect influence path. The dominant path is ($X_1 \rightarrow Y_1 \rightarrow Z$) because have a larger Total Effect ($-0.003 > 0.004$)

2. The second path (H2) states, that the Surprises M2 (X2) affect stock returns (Z) through market liquidity (Y1) and through earnings surprises (Y2).

2.1. Path $X_2 \rightarrow Y_1 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_2 \rightarrow Z$	-0.016	
Direct Effect	$X_2 \rightarrow Y_1$	-0.017	
Direct Effect	$Y_1 \rightarrow Z$	-0.430	
Indirect Effect	$X_2 \rightarrow Y_1 \rightarrow Z$	$(-0.017) * (-0.430) = 0.007$	
Total Effect = DE+IE		$0.007 + -0.016 = -0.009$	IE > DE

2.2. Path $X_2 \rightarrow Y_2 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_2 \rightarrow Z$	-0.016	
Direct Effect	$X_2 \rightarrow Y_2$	0.047	
Direct Effect	$Y_2 \rightarrow Z$	0.020	
Indirect Effect	$X_2 \rightarrow Y_2 \rightarrow Z$	$(0.047) * (0.020) = 0.001$	
Total Effect = DE+IE		$0.001 + -0.016 = -0.015$	IE > DE

Because DE surprises M2 to stock returns (by -0.016) is smaller than IE, M2 surprises against stock returns through market liquidity (by 0.007), and IE, M2 surprises on stock returns through earnings surprises (amounting to 0.001), it can be concluded that market liquidity and earnings surprises in this study are intervening variables because both of these pathways have additional influence through indirect influence paths. The dominant pathway is $(X_2 \rightarrow Y_1 \rightarrow Z)$ because it has a larger Total Effect $(-0.009 > -0.015)$.

3. The third path (H3) states, that the exchange rate (X_3) affects stock returns (Z) through market liquidity (Y_1) and through earnings surprises (Y_2),

3.1. Path $X_3 \rightarrow Y_1 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_3 \rightarrow Z$	-0.022	
Direct Effect	$X_3 \rightarrow Y_1$	0.013	
Direct Effect	$Y_1 \rightarrow Z$	-0.430	
Indirect Effect	$X_3 \rightarrow Y_1 \rightarrow Z$	$(0.013) \cdot (-0.430) = -0.006$	
Total Effect = DE+IE		$-0.006 + -0.022 = -0.028$	IE > DE

3.2. Path $X_3 \rightarrow Y_2 \rightarrow Z$

Effect	Variable	Coefficient	Result
Direct Effect	$X_3 \rightarrow Z$	-0.022	
Direct Effect	$X_3 \rightarrow Y_2$	0.018	
Direct Effect	$Y_2 \rightarrow Z$	0.020	
Indirect Effect	$X_3 \rightarrow Y_2 \rightarrow Z$	$(0.018) \cdot (0.020) = 0.000$	
Total Effect = DE+IE		$0.000 + -0.022 = -0.022$	IE > DE

Because the DE exchange rate on stock returns (by -0.022) is smaller than IE surprises exchange rate on stock returns through market liquidity (of -0.006), and IE exchange rate surprises to stock returns through earnings surprises (equal to 0.000), it can be concluded that market liquidity and profit surprises in this path are intervening variables because both of these pathways have additional influence through indirect influence paths. The dominant pathway is $(X_3 \rightarrow Y_2 \rightarrow Z)$ because it has a larger Total Effect $(-0.022 > -0.028)$

4. Discussion

That inflation surprises affect stock returns through market liquidity and profit surprises are not proven. this shows that information about economic fundamentals, is not a reference for the market / investor because there is still a lot of information that has not been captured by investors, Jepkemei (2017) that the relationship between inflation and stock market performance is negative and in line with Sorensen (1982) who concluded that the stock market did not overly react to a 72% percentage of anticipated monetary activity, in line with the findings of Munene (2007) in his study establishing a negative relationship between stock returns and expected inflation and contrary to the hypothesis by Fisher (1930), because the motivation of investors in investing or in making transactions in the capital market is return or capital gain. Partially market liquidity has a significant effect on stock returns Rauterkus (2004) and Brennan et al. (1998) that large companies have more trade volume than small companies, so the more the number of shares circulating in the capital market the easier it will be for investors to get the shares or the easier access to trade transactions so that they will motivate investors to transact more actively. So the easier and more volume of stock trading the more liquid the stock in the capital market. Liquidity is one of the important factors as attractiveness of investors in emerging markets due to high stock liquidity which makes trading costs cheaper. The researchers suggest that liquidity promotes the economy for developing countries and also the contribution of stock market liquidity has a significant positive effect on economic growth (GDP) Levine and Zervos (1998).

That M2 surprises affect stock returns through market liquidity and earnings surprises. The results showed that M2 surprises significantly affected market liquidity not proven, but surprise M2 has a significant effect on earnings surprises receive 45% or proven, from the observed research model and market liquidity and earnings surprises have no proven effect on stock returns. The effect of M2 on current company profits and expected earnings is mainly the effect of expectations of the money supply for dividends. Although current common stock prices will be affected by current changes in dividends, the main effect of the money supply is on the expected growth rate of dividends that occur from permanent changes in company earnings from positive project NPVs chosen with lower capital costs when interest rates fall causing the money supply to increase. Empirical evidence supports the notion that shocks to monetary contraction decrease corporate profits and that this change affects the

household sector in the form of lower dividend payments only by delay Consistent with the findings of Christiano, Eichenbaum, Evans (1996) and Deepke (2004).

Changes in the availability of money will affect expected earnings and their consequences for stock returns. Mukherjee and Naka (1995) argued that if an increase in the money supply would lead to economic expansion through increased cash flow and stock prices would benefit from the economic growth undertaken by this expansionary monetary policy. Farka (2009) argues that monetary policy in prides the money supply has a significant effect on stock returns. In terms of money demand, a decrease in the money supply will raise interest rates and reduce interest-sensitive spending on capital investment in Flannery and Protopapadakis (2002).

Kiyotaki and Moore (2001) state that liquid assets held are mainly hedging against real illiquid assets. An increase in money held for financial liquidity can reduce the money available for transactions. In this study in line with the research of Campbell, Grossman, and Wang's model (1993) where if the value of large shares traded results in a reversal of returns on illiquid markets it means that the money supply has no effect on market liquidity. (Gordon and Leeper, 2006). Using reserve money seems to be the right choice because, if the banking system has more money in the central bank, then liquidity decreases, and if reserves continue to decrease, liquidity will rise. Therefore, liquidity is inversely proportional to money reserves. Copeland and Galai (1983) state that liquidity decreases with the magnitude of price volatility in traded assets, with high levels of asset prices and low volumes.

That exchange rate surprises significantly influence stock returns through market liquidity and profit surprises are not proven. This is in line with Kurihara (2017) that policy makers influence the market with their policies; however, they usually intend to move the market as smoothly as possible without major turmoil or disruption. Therefore, the communication of the central bank with financial markets is very important to develop and maintain a sound financial market, and When monetary policy decisions by central banks and markets, liquidity is expected to be high due to a decrease in information asymmetry between informed and uninformed market participants.

Theory and empirical findings

Based on the results of the analysis and discussion, there are 3 findings on this study as follows:

- *Efficient market hypothesis theory* (Fama 1970), The findings show that this theory cannot explain macroeconomic surprises or shock to changes in stock returns, because the market does not respond to changes in macroeconomic conditions in the financial sector, On the other hand this theory is only able to explain the changes in earnings surprises;
- *APT theory* (Ross 1976) is not relevant and contradicts this condition, the results of the study show that systematic risk does not affect stock returns because the market ignores macroeconomic fundamentals and pays more attention to corporate fundamentals which are unsystematic risk;
- *Market liquidity theory* (Hui and Heubel (1984), shows that this theory is accepted and can explain changes in stock returns. Because market liquidity is an unsystematic risk part, which means that unsystematic risk can be diversified, and also as a determinant of the company's stock value. Empirical findings indicate that the higher the market liquidity, the greater stock returns will be and indicated low risk, meaning that market liquidity is proportional to stock returns this is illustrated in 3 companies (BFIN, KREN and PADI) seen in the variable market liquidity and stock returns

Conclusions

Return of an asset is also influenced by the liquidity of shares held by investors, illiquid assets will be difficult to trade when companies need funds. This will have an impact on shares of companies that are not liquid will tend to reduce the price of assets so that the return will be reduced. Market liquidity provides a stimulus to market participants for the quality of shares and stock liquidity to intensify the existence of "flight to liquidity".

Earnings of a company are key in valuing its shares so that earnings estimates, as well as earnings announcements will always be scrutinized by market participants. Earnings announcements can produce important perceptions about how the market uses information from figures published by the company, Earnings are used by investors for valuation purposes and also as a benchmark for internal and external pressures.

Corporate needs to increase reputation to prevent negative interpretations from market participants or speculators. Uncertainty in macroeconomic and monetary conditions shows that there is a high volatility in profits which leads to investor expectations.

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