

3 RESEARCH RESULTS

This study uses a regression estimation approach to predict *stock returns* and *trading volumes* at the time of an IPO. In addition, multiple regression analysis was used with OLS (*Ordinary Least Square*), and the following results were obtained to predict *stock returns* and *trading volume*.

Table 1. Estimated Regression to Predict Return and Trading Volume.

Variable	Model 1		Model 2		Model 3		Model 4	
	β	p-value	β	p-value	β	p-value	β	p-value
Neutral Sentiment	-0,014	0,116	-0,121	0,641	-0,102	0,725	-0,019	0,049**
Negative sentiment	0,006	0,170	-0,2129	0,103*	-0,242	0,090*	0,007	0,102*
Positive sentiment	-0,001	0,923	0,2687	0,069*	0,293	0,056*	-0,000	0,983
Liquidity					0,003	0,838	-0,000	0,755
Solvency Asset					0,026	0,439	-0,002	0,052**
Solvency Equity					-0,002	0,905	0,001	0,052**
Return on Assets					-0,151	0,091*	0,004	0,118
Return on Equity					0,033	0,247	-0,001	0,359
R2	0,127		0,317		0,111		0,239	

Return stock either profit or loss derived from stock investments. Returns Stock derived from the difference between the stock prices of the current to the previous period. Trading volume data uses trading volume data on the secondary market from the first day of trade. Liquidity uses the current ratio of $RL = \text{current assets} / \text{current debt}$. Asset Solvency is a Debt Ratio that compares total debt (total liabilities) with assets owned. Equity Solvency explains the relative portion between equity and debt used to finance company assets. Debt to Equity Ratio (DER) compares the total liabilities with equity. ROA (return on assets) refers to the profitability (profitability) and operational efficiency (operational efficiency). ROA was calculated by $\text{net income} / \text{total assets}$, while ROE is calculated with $\text{net income} / \text{total equity}$. The sign *** = significant at the 1% level, ** = significant at the 5% level, and * = significant at the 10% level.

The results showed that the first model neutral sentiments had no effect on *returns* stock, which is indicated by the inability for neutral sentiment to affect the brand image, as well as the company reputation. Furthermore, the affiliated information on Instagram was observed not to encourage the determinants of investors buying or selling actions. These are known to affect stock price movements, which is why *returns* from stocks do not demonstrate an increase or decrease. Meanwhile, the second model shows the inclusion of the control variable in the model; hence, it is established that the neutral sentiment has a significant effect on *returns* stock. This indicates that the inclusion of other information influences the effect of neutral sentiment on the *brand image* and reputation of a company. Furthermore, the related information on Instagram was observed to have encouraged the determination of investors towards buying and selling actions that possibly affect the movement of stock prices; thus, *returns* also increase or decrease.

The results of subsequent studies indicate that negative sentiment does not affect *returns* stock in the first model, although this is encouraged by the inclusion of some information in the second model. These results support the research conducted by Chen (2014) and He (2016), while Ranco (2015) reported the effect of negative sentiment on the reduction of CAR in 30 shares of companies listed on DJIA. Furthermore, the results of this current investigation indicate the influence of the negative sentiment observed on Instagram on the rise in stock prices, which subsequently increases the value of *returns* stock, therefore demonstrating the irrational behavior of investors. Based on the results,

it is also established that investors at the time of the IPO desire more short-term profits, and are more vulnerable to stock frying, hence, the upsurge in the number of shares on the first day on the secondary market that enter the ARA limit, followed by a drop again 3 days after, which touches the ARB. This is, therefore, the cause of the IPO share price increase, in the presence of negative sentiment, due to the fact that investors often hunt for short-term profits. Conversely, the positive sentiment in the first and second model illustrates the absence of any influence on *returns* stock. This indicates the inability of positive information on Instagram to encourage changes in stock prices. Thus *returns* from shares are unaffected. Also, this occurs because investors tend to take advantage of the positive sentiments that day, and no significant effect was found towards returns, which confirms that investors are not affected.

The results showed that neutral sentiment on Instagram had no effect on stock trading volume, both in the third and fourth models, indicating the inability to affect the increase or decrease in market stock prices. Furthermore, the absence of changes in prices causes investors not to take action on buying or selling shares. Hence, there is no change in the trading volume, and the market does not react. Meanwhile, a negative sentiment that appears on Instagram in the third and fourth model is seen to harm stock trading volumes, which indicates the investors' tendency to take advantage of the situation, and make transactions during a rise in stock price, in order to consequently sell shares and avoid deeper losses. Furthermore, the high activity performed causes a rise in the volume of stock trading, demonstrating the influence of negative sentiment on Instagram on a particular day. This was in line with research conducted by Joseph (2011), which stated the effect of high sentiment on trade volume.

The results of subsequent studies indicate the influence of positive sentiment on Instagram on the increasing volume of stock trading in the third and fourth models. This prompts an increase in investor activity in the aspect of making transactions, thus taking advantage of the situation, in order to obtain the highest *return*, subsequently leading to an increase in stock market trading volume. The results support the findings of Joseph (2011), which stipulated the influence of positive sentiments on the volume of stock trading.

4 CONCLUSION

Based on the results and discussion, the results showed the inability for the neutral sentiment on Instagram to affect the stock trading volume, while both negative and positive had a different effect. Furthermore, they collectively did not influence *returns* stock.

The limitation of this study is observed in the constraint of examining investor sentiment only on Instagram. Hence, future research ought to investigate other social media.

REFERENCES

- ALEXANDER, R. M. & GENTRY, J. K. 2014. Using social media to report financial results. *Business Horizons*, 57, 161–167.
- ALI, H. 2018. Twitter, Investor Sentiment and Capital Markets: What Do We Know? Available at SSRN 3230304.
- BOLLEN, J., MAO, H. & ZENG, X. 2011. Twitter mood predicts the stock market. *Journal of computational science*, 2, 1–8.
- CADE, N. L. 2018. Corporate social media: How two-way disclosure channels influence investors. *Accounting, Organizations and Society*, 68, 63–79.
- CHEN, H., DE, P., HU, Y. J. & HWANG, B.-H. 2014. Wisdom of crowds: The value of stock opinions transmitted through social media. *The Review of Financial Studies*, 27, 1367–1403.
- COVIELLO, L., SOHN, Y., KRAMER, A. D., MARLOW, C., FRANCESCHETTI, M., CHRISTAKIS, N. A. & FOWLER, J. H. 2014. Detecting emotional contagion in massive social networks. *PloS one*, 9, e90315.

3 RESEARCH RESULTS

This study uses a regression estimation approach to predict *stock returns* and *trading volumes* at the time of an IPO. In addition, multiple regression analysis was used with OLS (*Ordinary Least Square*), and the following results were obtained to predict *stock returns* and *trading volume*.

Table 1. Estimated Regression to Predict Return and Trading Volume.

Variable	Model 1		Model 2		Model 3		Model 4	
	β	p-value	β	p-value	β	p-value	β	p-value
Neutral Sentiment	-0,014	0,116	-0,121	0,641	-0,102	0,725	-0,019	0,049**
Negative sentiment	0,006	0,170	-0,2129	0,103*	-0,242	0,090*	0,007	0,102*
Positive sentiment	-0,001	0,923	0,2687	0,069*	0,293	0,056*	-0,000	0,983
Liquidity					0,003	0,838	-0,000	0,755
Solvency Asset					0,026	0,439	-0,002	0,052**
Solvency Equity					-0,002	0,905	0,001	0,052**
Return on Assets					-0,151	0,091*	0,004	0,118
Return on Equity					0,033	0,247	-0,001	0,359
R2	0,127		0,317		0,111		0,239	

Return stock either profit or loss derived from stock investments. Returns Stock derived from the difference between the stock prices of the current to the previous period. Trading volume data uses trading volume data on the secondary market from the first day of trade. Liquidity uses the current ratio of RL = current assets/current debt. Asset Solvency is a Debt Ratio that compares total debt (total liabilities) with assets owned. Equity Solvency explains the relative portion between equity and debt used to finance company assets. Debt to Equity Ratio (DER) compares the total liabilities with equity. ROA (return on assets) refers to the profitability (profitability) and operational efficiency (operational efficiency). ROA was calculated by net income/total assets, while ROE is calculated with net income/total equity. The sign *** = significant at the 1% level, ** = significant at the 5% level, and * = significant at the 10% level.

The results showed that the first model neutral sentiments had no effect on *returns* stock, which is indicated by the inability for neutral sentiment to affect the brand image, as well as the company reputation. Furthermore, the affiliated information on Instagram was observed not to encourage the determinants of investors buying or selling actions. These are known to affect stock price movements, which is why *returns* from stocks do not demonstrate an increase or decrease. Meanwhile, the second model shows the inclusion of the control variable in the model; hence, it is established that the neutral sentiment has a significant effect on *returns* stock. This indicates that the inclusion of other information influences the effect of neutral sentiment on the *brand image* and reputation of a company. Furthermore, the related information on Instagram was observed to have encouraged the determination of investors towards buying and selling actions that possibly affect the movement of stock prices; thus, *returns* also increase or decrease.

The results of subsequent studies indicate that negative sentiment does not affect *returns* stock in the first model, although this is encouraged by the inclusion of some information in the second model. These results support the research conducted by Chen (2014) and He (2016), while Ranco (2015) reported the effect of negative sentiment on the reduction of CAR in 30 shares of companies listed on DJIA. Furthermore, the results of this current investigation indicate the influence of the negative sentiment observed on Instagram on the rise in stock prices, which subsequently increases the value of *returns* stock, therefore demonstrating the irrational behavior of investors. Based on the results,

it is also established that investors at the time of the IPO desire more short-term profits, and are more vulnerable to stock frying, hence, the upsurge in the number of shares on the first day on the secondary market that enter the ARA limit, followed by a drop again 3 days after, which touches the ARB. This is, therefore, the cause of the IPO share price increase, in the presence of negative sentiment, due to the fact that investors often hunt for short-term profits. Conversely, the positive sentiment in the first and second model illustrates the absence of any influence on *returns* stock. This indicates the inability of positive information on Instagram to encourage changes in stock prices. Thus *returns* from shares are unaffected. Also, this occurs because investors tend to take advantage of the positive sentiments that day, and no significant effect was found towards returns, which confirms that investors are not affected.

The results showed that neutral sentiment on Instagram had no effect on stock trading volume, both in the third and fourth models, indicating the inability to affect the increase or decrease in market stock prices. Furthermore, the absence of changes in prices causes investors not to take action on buying or selling shares. Hence, there is no change in the trading volume, and the market does not react. Meanwhile, a negative sentiment that appears on Instagram in the third and fourth model is seen to harm stock trading volumes, which indicates the investors' tendency to take advantage of the situation, and make transactions during a rise in stock price, in order to consequently sell shares and avoid deeper losses. Furthermore, the high activity performed causes a rise in the volume of stock trading, demonstrating the influence of negative sentiment on Instagram on a particular day. This was in line with research conducted by Joseph (2011), which stated the effect of high sentiment on trade volume.

The results of subsequent studies indicate the influence of positive sentiment on Instagram on the increasing volume of stock trading in the third and fourth models. This prompts an increase in investor activity in the aspect of making transactions, thus taking advantage of the situation, in order to obtain the highest *return*, subsequently leading to an increase in stock market trading volume. The results support the findings of Joseph (2011), which stipulated the influence of positive sentiments on the volume of stock trading.

4 CONCLUSION

Based on the results and discussion, the results showed the inability for the neutral sentiment on Instagram to affect the stock trading volume, while both negative and positive had a different effect. Furthermore, they collectively did not influence *returns* stock.

The limitation of this study is observed in the constraint of examining investor sentiment only on Instagram. Hence, future research ought to investigate other social media.

REFERENCES

- ALEXANDER, R. M. & GENTRY, J. K. 2014. Using social media to report financial results. *Business Horizons*, 57, 161–167.
- ALI, H. 2018. Twitter, Investor Sentiment and Capital Markets: What Do We Know? Available at SSRN 3230304.
- BOLLEN, J., MAO, H. & ZENG, X. 2011. Twitter mood predicts the stock market. *Journal of computational science*, 2, 1–8.
- CADE, N. L. 2018. Corporate social media: How two-way disclosure channels influence investors. *Accounting, Organizations and Society*, 68, 63–79.
- CHEN, H., DE, P., HU, Y. J. & HWANG, B.-H. 2014. Wisdom of crowds: The value of stock opinions transmitted through social media. *The Review of Financial Studies*, 27, 1367–1403.
- COVIELLO, L., SOHN, Y., KRAMER, A. D., MARLOW, C., FRANCESCHETTI, M., CHRISTAKIS, N. A. & FOWLER, J. H. 2014. Detecting emotional contagion in massive social networks. *PloS one*, 9, e90315.