THE IMPACT OF ONLINE NEWS ON INVESTOR DECISION-MAKING IN FRONTIER MARKETS– EVIDENCE FROM THE VIETNAMESE MARKET

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Abstract

This study analyzes the information impacts from online news on investment decisions in the context of a frontier market. Sentiment extracted from online news posts has a clear effect on the investment behavior of individual investors. Accordingly, optimistic news promotes an increase in returns. In this study, 3-factor Fama-French model is used. The research period is divided into four phases to better see the impact of online news in different economic conditions. Government support policies also have a positive impact, help to stabilize the economy and create favorable conditions for businesses to develop, thereby boost stock prices. However, pessimism during a crisis, such as the COVID-19 pandemic, has a stronger and more lasting effect. In conclusion, this study provides another important empirical evidence of the relationship between online news and investor decision-making in frontier markets.

Keywords: investment decision, online news, stock returns.

1. Introduction

Information plays an important role in shaping expectations and investment decisions in the stock market. Accessing to accurate and timely information helps investors

minimize risks. It also strengthens confidence and improves the operational efficiency of financial markets. Conversely, the spread of misinformation or lack of transparency can lead to negative consequences. These consequences include speculation, abnormal price movements, and a decline in investor confidence. The rapid development of information technology and the process of globalization have significantly changed the way information is approached. In particular, the Internet has become the main source of information. It directly affects investment behavior and the volatility of the stock market. Economic, political, social news, and even rumors, can spread quickly through online media platforms. This creates far-reaching impacts on investors' psychology and investment decisions.

Among online communication platforms, online news stand out as a mainstream information channel. Electronic newspapers have high reliability and the ability to strongly influence the financial market. The online news provides quickly updated news and reflects important events affecting the stock market. In addition, the online news also guides the psychology and behavior of investors through in-depth analysis and forecast. Research of Limmaneewijit, Jearviriyaboonya, and Jirasatthumb (2023) pointing out that the source of information has a great influence on investment decisions. People who receive information through online news, with an official and reputable nature are often more confident and make stronger investment decisions. In contrast, people who access information through social media are often of less trust and do not make investment decisions.

Research on the online news impact on investor decision-making has attracted the attention of many researchers. Some of the outstanding studies can be mentioned as the research of Antweiler and Frank (2006), L. Fang and Peress (2009), Li et al. (2014), Costola, Hinz, Nofer, and Pelizzon (2023). However, the majority of these studies focus on analyzing the context of developed or emerging financial markets. Research on frontier markets is still quite limited. Meanwhile, emerging markets are characterized by a lack of

clear regulations and strong regulatory bodies. This makes investors vulnerable to risks related to misinformation or fraud. On the other hand, the majority of investors in these markets are individual investors. Their investment behavior is greatly influenced by crowd psychology, risk aversion, and irrational profit expectations. Due to limited resources and financial knowledge, individual investors tend to rely on free and accessible information channels such as online news. These characteristics provide an ideal context for studying the impact of information in electronic newspapers on financial markets.

This study provides empirical evidence of the impact of information from online news on investment decisions in the context of a frontier market – Vietnam. Vietnam is currently listed by MSCI[1] as a frontier market, with the goal of upgrading to an emerging market to attract international capital flows and promote sustainable development. In Vietnam, the Internet has become an indispensable part of socio-economic life. Vietnam is currently in the group of countries with a high rate of Internet usage. Vietnam ranks 12th globally and 6th in Asia. As of June 2021, about 77.4% of Vietnam's population has access to the Internet. This number continues to grow to 79.1% in 2024, corresponding to 78.44 million users (Datareportal, 2024). This research will contribute to improving the understanding of the factors that impact investment decision-making. It also provides a scientific basis for policymakers and regulators to optimize oversight measures, improve information transparency, and mitigate risks for individual investors.

This study uses the 3-factor Fama French model. A new factor added is the sentiment of articles in online news. Sentiment is the representative of online news, directly affecting investment decisions and indirectly affecting the returns of companies' stocks. In addition,

[1] Morgan Stanley Capital International, a company that provides financial indices, research, and data analysis on capital markets across the globe. MSCI is best known for its set of indices, especially stock market indices, which are widely used to measure market performance and serve as the basis for investment funds, including ETFs and mutual funds.

 DOI: https://doi.org/10.65153/czhtbm52

the study also divided the research phase into 4 parts, going through stages such as the COVID_19 pandemic, support from the Government, and post-pandemic recovery. As a result, the influence of online news on investment behavior is more clearly reflected in different market conditions. In summary, this study adds to the literature review an empirical evidence of the influence of information in online news on investors' decision-making in the context of frontier markets.

2. Research Overview

First Research Direction is an assessment of the impact of news on investor sentiment. News is divided into the influence of good news and bad news. Method Data mining and text processing are used to exploit latent emotional states in texts through semantic analysis. The support vector machine method was used by Mittermayer (2004) to classify news as good news (resulting in a 3% increase in the stock price), and bad news (resulting in a 3% decline in the stock price), and "non-volatile" (the rest of the news). Antweiler and Frank (2006) employed the Naive Bayesian classifier to categorize news from the Wall Street Journal by topic. For each topic, the event study methodology was utilized. In the short run, the stock market tends to react positively to favorable news and negatively to unfavorable news; however, over the long term, these responses tend to reverse. This suggests that the market exhibits signs of overreacting to short-term news events. This indicates that the market shows signs of overreacting to the news.

Newspaper news has a significant impact on market profits and volatility Stock School, especially in times of crisis or economic instability. Studies have shown that positive news for ESG (Environmental, Social, and Governance) indices often boosts stock returns in the short term, improves investor sentiment, and reduces the risk of stock price collapse (Yu, Liang, Liu, & Wang, 2023). In contrast, negative news has a stronger and more long-lasting impact, it often leads to sell-offs, stock price declines, and increased market volatility (Amstad, Gambacorta, He, & Xia, 2021; TUAN, 2021).

 DOI: https://doi.org/10.65153/czhtbm52

A significant number of research efforts have relied on the volume of news articles as an indicator of information events to forecast stock profitability and trading activity. Legs (2003) tested investors' reactions to the news using article headline data about each company. Stocks that have at least one news article within the month are categorized and sorted based on their returns. One-third of the companies with the largest profits are labeled as the "good news" and one-third of the companies with the worst profits are labeled as the "bad news". They found that stocks with bad news were more volatile than stocks in the good news group. But focusing on the content of the article instead of the title can yield more useful information because the title can sometimes confuse or mislead the reader. L. Fang and Peress (2009) Determine the total number of articles related to a specific stock and observe that stocks which are less covered by the media will result in higher market returns compared to stocks that are widely reported in the media.

Second Research Direction Considering the news and press provides important information for investors. The researchers discovered that the unexpected element (calculated as the difference between the actual average and the published unemployment rate in news reports) of U.S. news on unemployment and inflation influences yields and volatility in emerging stock markets (Balcilar, Cakan, & Gupta, 2017). Zhang, Song, Shen, and Zhang (2016) categorized news into two types: news directly related to investment activities and news that consists of reposted or summarized daily news. Using the event study approach, they discovered that the former creates short-term price pressure in the stock market, which fully reverses within 50 trading days, while the latter results in only a partial reversal effect over the same period.

The impact of news sentiment depends not only on positive or negative content, but also on the market context, information transparency and type of news (Costola et al., 2023; Xu, Liang, Li, & Huynh, 2022). Emerging markets are often more strongly influenced by international news than developed markets. This statement emphasizes the importance of

 DOI: https://doi.org/10.65153/czhtbm52

market sentiment analysis in building investment strategies (Jin, Chen, & Yang, 2024). These findings confirm that, while positive news can provide short-term growth drivers, negative news leaves a more far-reaching and sustainable impact on investor behavior and market performance (Fabozzi & Nazemi, 2023; Fraiberger, Lee, Puy, & Ranciere, 2021).

The third research direction examines the effect of news on investor expectations. While the majority of studies concentrate on broad market news and its relationship with stock market returns and trading volumes, certain scholars also investigate how news influences the volatility of stock returns. Berry and Howe (1994) suggested that there is a positive relationship between the volume of mass information – quantified by the number of news articles released by Reuters News Service over a given period – and trading volume, but has little impact on price movement. The amount of news in Baidu News, a Chinese news channel, also has a favorable relationship with the volatility of stock returns (Shen, Zhang, Xiong, Li, & Zhang, 2016; Zhang et al., 2016).

Although there is much research on the impact of online news on investment psychology and behavior, there are still notable gaps. First, there is a lack of research on the impact of online news on investors in frontier markets, especially Vietnam. Second, current studies are mainly focused on the overall market, lacking research at the company level. Third, research on direct sentiment through textual language analysis in Vietnam is still limited. These gaps need to be filled in future studies.

3. Research models and hypotheses

This study uses the 3-factor Fama French model (FF3FM). When comparing the Capital Asset Valuation (CAPM), FF3FM, and Fama-French 5-factor models (FF5FM), Foye (2018) providing evidence that the FF5FM model works better than the FF3FM model in the context of Eastern European and Latin American countries but in the Asian market gives the opposite result. K. Fang, Wu, and Nguyen (2017) provide evidence of the effectiveness of the FF3FM model in the context of the Vietnamese market. Ekinci and

 DOI: https://doi.org/10.65153/czhtbm52

Bulut (2021) asserts that, although the FF3FM model produces different results, it still works well in a lot of contexts because the 4 or 5 factor model requires a large number of stocks to create different categories.

Investors' sentiment data is exploited from the SMCC.vn website of Information Selective Technology Joint Stock Company (InfoRe). SMCC allows users to enter the search keyword system and give results including: (1) links to posts containing keywords; (2) AI reviews are negative, neutral, or positive sentiments; (3) the degree of influence of the source. Based on these three parameters, the authors standardize the investor's sentiment index for each specific stock ticker, which is SI_NEWS on a scale from -100 to 100 according to the following formula:

$$SI\_NEWS_{i,t} = \frac{T_{i,t}}{Max_{i,t}\{|T_{i,t}|\}}$$

$$T_{i,t} = \sum_{k} x_{i,t,k} * R_{i,t,k}$$

In which:

- $x_{i,t,k}$ is the sentiment point of stock i in the article k in week t. Posts rated as negative, neutral, and positive by SMCC's AI are assigned a score of -1, 0, and 1, respectively.
- $R_{i,t,k}$ is the influence of the source of the article k of stock i in week t. This level of influence is graded into 11 levels from 0 to 10. The basis for SMCC.vn to develop this scale is the website traffic and the credibility of the newspaper.

Based on the SI_NEWS index of each stock ticker, the study divided the stocks into 4 categories from Q1 to Q4 and the Q4-1 reserve portfolio. The Q1 portfolio includes the stocks with the lowest level of sentiment (the most pessimistic) and the Q4 portfolio includes the stocks with the highest level of sentiment (the most optimistic). This grouping is readjusted weekly.

 DOI: https://doi.org/10.65153/czhtbm52

Next, the study estimates the excess return of each portfolio by applying the FF3FM model to each group. At the same time, to clarify the impact of the COVID-19 pandemic and the support policies from the Vietnamese Government on the economy in general and the stock market in particular, the authors' group adds 3 dummy variables to divide the study period into 4 stages. The time points for dividing the stages are: (1) the start of the COVID-19 pandemic in Vietnam, which began when the first COVID-19 case was detected in Vietnam on January 23, 2020; (2) the economic support package from the Vietnamese Government, which came into effect on July 1, 2021; and (3) on October 11, 2021, when Vietnam officially reopened domestic economic and social activities after the COVID-19 pandemic ended.

The group regression model on the influence of electronic newspapers on the returns of each group of stocks is as follows:

$$R_{p,t} - R_{f,t} = \alpha + \beta_m(R_{m,t} - R_{f,t}) + \beta_s SMB_t + \beta_h HML_t + \mathrm{D1} + \mathrm{D2} + \mathrm{D3} + \varepsilon_{i,t} \quad (1)$$

The meaning and scale of the variables in model (1) are as follows:

Table 1: Explanation of the meaning of variables in the model (1)

STT	Variable name	Ampersand	Variable Measurement
1	Profitability of portfolio p in week t	Rp,t	The weekly profitability of category p is calculated in % and determined by the formula: $R_{p,t} = \frac{\sum R_{i,t}}{N}$ In which: - Ri,t: The rate of return of securities i in category p in week t - N: Number of shares in portfolio p in week t

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2	Risk-free interest rate in week t	Rf,t	The risk-free interest rate is calculated in % and is the interest rate of Vietnam's 10-year government bonds.
3	The profitability of the stock market in the week	Rm,t	The market's profitability is calculated in % and determined by the formula: $R_{\mathrm{m,t}} = \frac{\mathrm{VnIndex}_t - \mathrm{VnIndex}_{t-1}}{\mathrm{VnIndex}_{t-1}} x\ 100$ In which: - Vn-Indext: The Vn-Index closed the week - Vn-Indext-1: Vn-Index closes week 1
4	Size premium	SMB	It is the difference between the profitability of a small-scale portfolio and the profitability of a large-scale portfolio.
5	Value premium	HML	It is the difference between the profitability of a portfolio with a high book value/market price (BE/ME) ratio and the profitability of a portfolio with a low BE/ME ratio.
6	During COVID-19 pandemic	D1	The time to determine the beginning of the COVID_19 pandemic in Vietnam was when the COVID_19 case was detected in Vietnam on January 23, 2020. D1 receives a value of 0 before January 23, 2020; receive a value of 1 for the period from 23/1/2020 onwards.

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7	The government relief packages	D2	A support package worth VND 26,000 billion from the Government to help employees and employers facing difficulties due to the COVID-19 pandemic. D2 receives a value of 0 before July 1, 2021; receive a value of 1 for the period from 1/7/2021 onwards.
8	After COVID-19 pandemic	D3	Vietnam officially reopened socio-economic activities in the country. D3 receives a value of 0 before 11/10/2021; receive a value of 1 for the period from 11/10/2021 onwards.

(Source: authors' proposes)

This study used 3 representatives of investor sentiment, including SI_NEWS, Δ SI_NEWS and ASI_NEWS.

ΔSI The change in sentiment is measured in week t and is calculated as follows:

$$\Delta SI\_NEWS = SI\_NEWS_t - SI\_NEWS_{t-1}$$

ASI_t Measure the degree of change in emotions:

$$ASI\_NEWS_t = SI\_NEWS_t - median(SI\_NEWS_{t-1}, \dots, SI\_NEWS_{t-7})$$

Because there are 3 representatives of investor sentiment, the category regression is also done 3 times.

With the characteristics of a frontier market like Vietnam, information from online news also has a very strong influence on investors. Therefore, the study expects to find a positive relationship between the sentiment expressed in online news and the returns of

 DOI: https://doi.org/10.65153/czhtbm52

stocks. The research hypothesis is: *The more optimistic the news from online news, the greater the returns of the stock.*

4. Results and discussion

4.1. Descriptive statistical results

Table 2: Statistics describing the variables in the model of the influence of electronic newspapers on the returns of the stock portfolio

Variable	*Number of observations*	*Mean*	*Standard Error*	*Min*	*Max*
Rm-Rf	257	0.0502	2.7803	-14.5969	11.0706
SMB	257	0.4024	1.7669	-4.9829	4.8201
HML	257	0.4402	2.0314	-4.8524	7.9029
D1	257	0.7938	0.4054	0	1
D2	257	0.5058	0.5009	0	1
D3	257	0.4475	0.4982	0	1

(Source: authors' systhesis)

According to the statistical data described in Table 2, the excess returns of the Vietnamese stock market in the period 2019 - 2023 has fluctuated very strongly due to the impacts of the COVID-19 pandemic. The smallest value of Rm-Rf is -14.5969, corresponding to the time when the VN-Index plunged the most in history since the market was established. On March 24, 2020, the VN-Index fell to 659.21 points, the lowest in many years before, compared to a peak of 991.46 points in January 2020. Specifically, VN-Index has lost nearly 33% of its value in just over 2 months, from the beginning of January to the end of March 2020. The main reason is that the COVID-19 pandemic has appeared, causing investor sentiment to be confused. Social distancing and the closure of many domestic and global economic sectors have increased fears of an economic recession.

 DOI: https://doi.org/10.65153/czhtbm52

Foreign investors continuously net sold during this period, causing liquidity to weaken. The largest value of Rm-Rf is 11.0706, which fell at the end of November 2022 when the VN-Index touched 1,048 points on November 30, 2022. These positive signs of recovery are the result of a series of support measures from the Government and the State Bank to stabilize the macroeconomy, control the corporate bond market, and increase investor confidence. On the other hand, interest rate hike pressure from the US Federal Reserve (FED) shows signs of easing, so fears of a global economic recession have subsided, helping to improve overall sentiment.

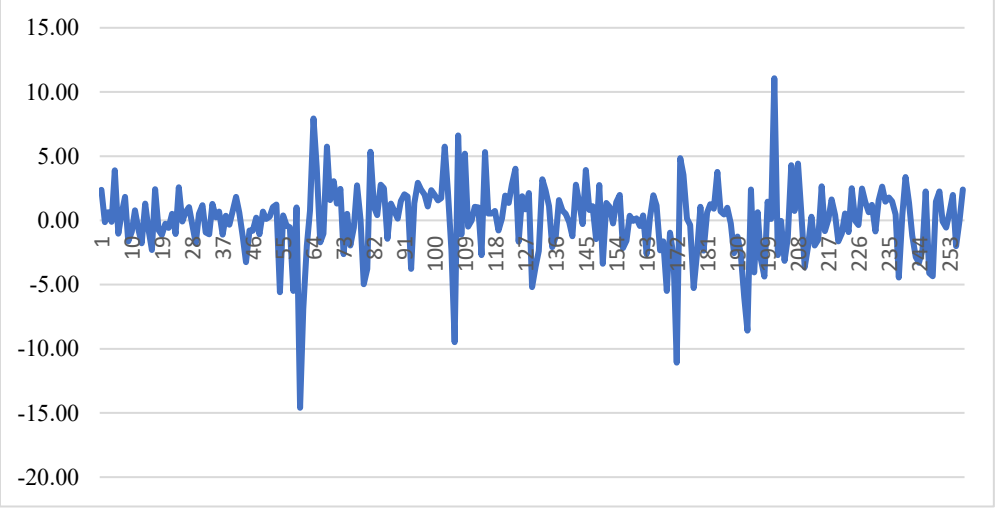

Figure 1: Fluctuations of returns of Vietnam's stock market in the period of 2019 – 2023

(Source: authors' synthesis)

4.2. Regression results by list

Table 3A: Analysis of the impact of online news on the returns of the stock portfolio divided by SI_NEWS

SI_NEWS					
	Q1	**Q2**	**Q3**	**Q4**	**Q41**
Rm-Rf	0.598***	0.510***	0.514***	0.707***	0.109**

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	[0.059]	[0.068]	[0.055]	[0.064]	[0.054]
SMB	0.031	0.045	-0.321***	-0.692***	-0.724***
	[0.096]	[0.099]	[0.084]	[0.109]	[0.107]
HML	0.493***	0.400***	0.656***	0.804***	0.312***
	[0.086]	[0.079]	[0.084]	[0.098]	[0.088]
D1	-0.836**	0.274	0.326	-0.037	0.830**
	[0.422]	[0.419]	[0.375]	[0.364]	[0.419]
D2	0.509	0.638	0.965*	0.373	-0.125
	[0.560]	[0.521]	[0.496]	[0.498]	[0.431]
D3	-0.999*	-0.580	-1.287***	-0.534	0.443
	[0.541]	[0.490]	[0.487]	[0.499]	[0.416]
_Cons	-1.102***	-0.961***	-0.248	0.246	1.266***
	[0.328]	[0.347]	[0.298]	[0.284]	[0.333]
N	257	257	257	257	257
R^2	0.527	0.453	0.584	0.707	0.343
R^2_adjusted	0.515	0.439	0.574	0.700	0.327
Note: *, **, *** denote significance levels of less than 10%, 5%, and 1%, respectively. Values in square brackets [ ] are standard errors.					

(Source: authors' synthesis)

Table 3B: Analysis of the impact of online news on the returns of the stock portfolio divided by Δ SI_NEWS

Δ SI_NEWS					
	Q1	**Q2**	**Q3**	**Q4**	**Q41**

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Rm-Rf	0.539***	0.688***	0.516***	0.582***	0.043
	[0.061]	[0.060]	[0.068]	[0.065]	[0.057]
SMB	-0.079	-0.458***	0.055	-0.444***	-0.366***
	[0.089]	[0.097]	[0.091]	[0.092]	[0.095]
HML	0.468***	0.617***	0.454***	0.810***	0.343***
	[0.085]	[0.090]	[0.084]	[0.091]	[0.089]
D1	-1.115**	0.527	0.230	0.054	1.199**
	[0.466]	[0.353]	[0.380]	[0.368]	[0.484]
D2	0.924*	0.310	0.993*	0.263	-0.651
	[0.520]	[0.528]	[0.530]	[0.526]	[0.469]
D3	-1.380***	-0.557	-0.711	-0.763	0.595
	[0.486]	[0.518]	[0.524]	[0.514]	[0.424]
_Cons	-1.173***	-0.164	-0.525*	0.343	1.434***
	[0.384]	[0.260]	[0.315]	[0.273]	[0.397]
N	257	257	257	257	257
R^2	0.500	0.662	0.480	0.651	0.181
R^2***_adjusted***	0.488	0.654	0.468	0.643	0.161
Note: *, **, *** denote significance levels of less than 10%, 5%, and 1%, respectively. Values in square brackets [ ] are standard errors.					

(Source: authors' synthesis)

Table 3C: Analysis of the impact of online news on the returns of the stock portfolio divided by ASI_NEWS

ASI_NEWS

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	Q1	Q2	Q3	Q4	Q41
Rm-Rf	0.724***	0.546***	0.505***	0.549***	-0.175***
	[0.070]	[0.057]	[0.061]	[0.060]	[0.060]
SMB	-0.447***	-0.066	0.022	-0.436***	0.011
	[0.103]	[0.088]	[0.092]	[0.089]	[0.088]
HML	0.673***	0.433***	0.492***	0.751***	0.078
	[0.091]	[0.085]	[0.079]	[0.095]	[0.088]
D1	-0.247	-0.861*	0.582	-0.164	0.113
	[0.383]	[0.441]	[0.419]	[0.358]	[0.373]
D2	0.919*	0.756	0.335	0.668	-0.240
	[0.534]	[0.580]	[0.533]	[0.499]	[0.521]
D3	-0.955*	-1.373**	-0.392	-0.682	0.250
	[0.533]	[0.560]	[0.503]	[0.498]	[0.501]
_Cons	-1.752***	-0.357	-0.638*	0.218	1.888***
	[0.303]	[0.364]	[0.345]	[0.267]	[0.271]
N	257	257	257	257	257
R^2	0.664	0.503	0.486	0.619	0.050
R^2***_adjusted***	0.656	0.491	0.474	0.610	0.027

Note: *, **, *** denote significance levels of less than 10%, 5%, and 1%, respectively. Values in square brackets [ ] are standard errors.

(Source: authors' synthesis)

The models applied to the portfolios are time series models. The ADF test shows that all variable series are stationary, thus the OLS estimation method is appropriate. Since most models exhibit heteroscedasticity, a robust estimation option has been applied to

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address this issue. In most cases, the model statistics confirm the significance of the FF3FM model in the Vietnamese stock market.

The alpha values in Tables 3A, 3B, and 3C are the intercepts of the models, representing the risk-adjusted returns of the stock portfolios. In some models, the blocking factors do not make sense. Sometimes, however, even if the constants are not statistically significant, their inclusion in the research model is still important for theoretical reasons and for use in analysis. The model results shown in tables 3A, B, and C show that there is a remarkable general trend in the abnormal profitability of different categories. The Q1 category has a negative alpha coefficient and is the lowest of the 4 categories from Q1 to Q4. This coefficient also tends to gradually increase from the Q1 to Q3 category. This result indicates that pessimistic articles have an impact on investor sentiment, which in turn has a negative impact on the returns of the portfolio. However, the opposite direction does not have much statistical significance. The alpha coefficients in categories that are considered to have positive sentiment such as Q4 are not statistically significant. This result implies that negative investor sentiment has a stronger impact on stock market volatility than positive sentiment.

The SMB factor has the opposite impact on the returns of the portfolio. This result means that large-scale companies have a higher average profitability than small companies on the Vietnamese stock market. The main reason is that large companies give higher media coverage, which, in turn, has a stronger impact on investor sentiment.

The impact of the COVID-19 pandemic and government policies is reflected in variables D1, D2, and D3. In models where the beta coefficients of these variables are statistically significant, we see that the emergence of COVID-19 has a negative impact on the returns of stocks. In particular, the beta coefficient of the D1 variable is only meaningful in categories that are more negatively evaluated such as the Q1 category in the SI_NEWS and ΔSI_NEWS models, and the Q2 category in the ASI_NEWS model. This result implies

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that the COVID-19 pandemic has impacted companies with more pronounced negative sentiment than others. In other words, the negative sentiment of investors seems to be amplified during periods of strong market volatility.

The impact of support policies from the Government generally has a positive impact on the market. This is reflected in the positive beta coefficient of the D2 variable in the Q3 categories of the SI_NEWS model; Q1 and Q3 of the Δ SI_NEWS model; Q1 category in the ASI_NEWS model. Economic support packages from the government, especially during times of crisis (such as the COVID-19 pandemic), often create a positive signal for the stock market. Investors may feel more reassured knowing that the government is taking measures to stabilize the economy, minimize damage, and promote growth. This can lead to an increase in confidence and an influx of money into the stock market. On the other hand, when the government introduces measures such as tax cuts, interest rate support, or the provision of preferential loan packages, this can create a favorable environment for businesses to grow, thereby increasing the profit expectations of listed companies.

However, the COVID-19 pandemic has left long-term consequences for the economy in general and the Vietnamese stock market in particular. This is reflected in the beta coefficient of the variable D3 when in most models it is negative. On the other hand, when combined with the impact of D2 – government support, the result is still -0.322 (in the Q3 category – SI_NEWS pattern); and -0.036 (in the Q1 category – model ASI_NEWS). This shows that the government's supportive policies have contributed to a strong market recovery. However, compared to the period before the Vietnamese government announced the end of the social lockdown due to COVID-19, the stock market has not fully recovered.

5. Conclusion and implications

This study has shown that information from online news has a great influence on investors' investment decisions in the Vietnamese stock market, especially in the context

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of a frontier market. The results of the study are in agreement with the research of Yu et al. (2023). Accordingly, positive news promotes the returns of stocks in the short term, improves investor sentiment and reduces the risk of stock price collapse.

The above conclusions are even more evident in the strong fluctuations of the market in the period 2019-2023, especially during the COVID-19 pandemic. Support policies from the Government have a positive impact on the stock market. These measures help stabilize the economy, increase confidence, and boost cash flows into the market. Support packages from the Government, such as tax breaks and interest rate support, have contributed to creating a favorable environment for businesses to grow, thereby increasing the profit expectations of listed companies and positively impacting stock prices. The pessimistic sentiment that prevails on online news during a crisis, such as the COVID-19 pandemic, has a stronger impact on the stock market. This increases volatility and affects the stability of the market. Although supportive policies help improve the situation, Vietnam's stock market has not fully recovered compared to before the outbreak of the pandemic.

One limitation of the study is that it is not possible to assess the long-term impact of information from online news on investment decisions and market performance. Long-term effects may differ from short-term effects and need to be studied more thoroughly. Future research directions may focus on assessing the long-term impact of information from online news on the frontier market. In addition, the study can be extended to other markets to compare the impact of online news on investment decisions in different market conditions. This study provides an important scientific basis for policymakers and regulators to improve information transparency and mitigate risks for individual investors.

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