How Financial News Shapes the Way Investors Think and Act: A Study of Stock Market Sentiment

Divyansh Singh[1], Sayali Patil[2], Tushar Subhash Chandra Pradhan[3]
[1,2]*MBA Students, Faculty of Management Studies, Parul University, Vadodara, Gujarat – 391760*
[3]*Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat – 391760*

***Abstract*—Each day millions of investors make investment decisions buy or sell or hold and a large part of what influences those decisions is the news people consume. Financial reporting has a remarkable ability to influence the state of the market, and this study seeks to understand just how it does. By designing a detailed questionnaire and administering it to 100 individuals, ranging from working professionals to active investors to students, we set out to examine how good news and bad news financial headlines influence people decision making styles. What we found is startling: almost everyone we surveyed believed that news (good or bad) makes a difference in how investors behave; many also indicated that they use news as the lens through which they read the market. Besides looking at individual preferences, our research also provides insight into the burgeoning field of sentiment indicators, measures that are now being used to identify market trends. We are in the process of analysing the data we collected and hope that it will provide a human perspective to a market statistic.**

***Index Terms*—stock market sentiment, news headlines, investor behaviour, sentiment analysis, financial news**

I. INTRODUCTION

Financial markets aren't number crunching machines. There is a real, living, human person on both sides of any trade. They read the newspaper over breakfast, respond instantly to a breaking news alert, and occasionally make snap judgments based on how a story affects them. This study is interested in the psychology behind this reality.

For a period, the opinion of both economists and financial theorists was that investors were nothing more than rational individuals who based their decisions strictly upon facts: company earnings reports, interest rates, and macroeconomic indices. That view has become harder to defend. Over the past few decades, a growing body of research in behavioural finance has shown that emotions, instincts, and social influences play a significant sometimes dominant role in how people invest. The collective mood of investors, often called market sentiment, can drive prices up or down in ways that have nothing to do with a company's actual performance.

The number one factor influencing investors' sentiments today is financial news. Having the world at your fingertips with smart phones and constant internet access means that there is no lack of financial news being disseminated 24/7. One piece of news about the latest earnings, a new governmental decision or a international crisis situation can cause investors to send stocks soaring to all new highs or crashing them down with equally fast ferocity. The quick access to such fast paced news have resulted in immediate, sharp, and violent investors' responses to market and external influences.

Compare the varied way we react to good and bad news. A headline some business or economic indicator rises to record levels or the economy speeds up sends a surge of good feeling through stock markets and other financial assets; investors are confident and start buying more stocks, markets become more active. Switch the story to one of financial scandal, rising inflation or political unrest and the feeling is one of unease and fear; investors sell down holdings or just batten down the hatches and wait and see. This is not irrational behaviour it is human nature but it has a marked influence on markets.

This is where the field of sentiment analysis becomes relevant. Sentiment analysis, as a field of research, utilizes computational approaches to quantify the

emotional slant of the text data, that is, whether the news article reads as positive, negative, or neutral.

By processing large volumes of text, researchers and investors can get a sense of the "mood" in the information environment and use that to anticipate how markets might respond. Recent advances in natural language processing (NLP), machine learning, and data analytics have made this kind of analysis increasingly powerful and practical.

This study takes a slightly different approach. Rather than just analysing news articles themselves, we wanted to hear directly from investors about how they experience and respond to financial news. Through a structured survey, we asked people whether positive headlines made them more likely to buy stocks, whether negative stories made them hesitant, and whether they thought tools like sentiment analysis could actually help predict where the market is headed. Our goal is to bridge the gap between data-driven sentiment analysis and the lived experience of investors. Our aim here is to see if our target sample of everyday investors can make any useful sense of financial news and ultimately how they can respond to it in order to help us give something back to the behaviour finance community.

II. LITERATURE REVIEW

The view that investors might not always be rational has been around in academia for some time. Classical theory argued that markets are efficient that is, stock prices always incorporate all existing information and investors make reasoned, emotionless choice. But this picture started to crack as researchers began documenting just how often emotions, biases, and social dynamics influence financial behaviour.

Behavioural finance developed to answer these questions. Studies from researchers such as Kahneman & Tversky (1979) in their prospect theory showed how people do not weigh gains and losses at parity; the emotional weight attached to a loss is disproportionately greater than that for an equivalent gain, which heavily influences how investors react to bad news. Shiller (2003) further proposed that it was emotions and social stories rather than efficient market theory that accounted for the volatility of markets. Focusing solely on news and not all types of media. This evidence is very clear. It has been found that news and investor sentiment (partially generated by the news) can affect stock returns (Baker and Wurgler 2006, 2007), and that the tone of financial newspaper columns predict short term market direction, with pessimistic columns negatively affecting stock returns (Tetlock 2007). This evidence supports the notion that the news we receive is more than just a collection of facts. Good news creates an optimistic environment. Increased profit results and the perception of rising revenues or positive government policies will fuel a wave of buying because individual investors gain confidence in the economy. Conversely, bad news concerning financial crisis, scandals, or global threats cultivates uncertainty and fear in investors, generating a wave of selling and a rise in market fluctuations. Barber and Odean (2008) discovered that "salient news, news with high impact, does affect individual investors' decisions to buy, while controlling for all of the normal predictors of investment returns" and labelled it the attention effect.

The everyday growth of digital media also means the definition of what is news has widened. Information originating in social networking sites such as Twitter have had a significant impact on investors' view Bollen, Mao, and Zeng (2011) famously demonstrated that the collective mood expressed on Twitter could predict stock market movements with surprising accuracy. Nguyen et al. (2015) and Oliveira et al. (2017) extended this work by showing that sentiment derived from microblogs and social platforms correlates meaningfully with short-term price changes. The tools for analysing sentiment have advanced dramatically in recent years. Advances in natural language processing (NLP) including the many measures of financial text, like the Financial Sentiment Lexicon created by Loughran and McDonald (2011) have eased the task of capturing the tone of financial text on a large scale. Authors now use machine learning algorithms to analyse thousands of news articles all at once to find interesting relationships

Schumaker and Chen (2009) showed that breaking financial news analysed through these techniques could improve stock market predictions.

Despite all this progress, one area remains relatively underexplored: how individual investors themselves perceive and respond to news. Much of the current research concentrates on the aggregate impact of news sentiment on market prices using databases containing thousands of articles/tweets. Fewer. Fewer studies

take the time to sit with investors and ask them directly: How does this headline make you feel? Does this change what you plan to do with your money?
This study is an attempt to fill that gap. By collecting and analysing survey responses from individuals with stock market experience, we aim to understand the human side of news-driven sentiment and in doing so, offer a richer, more grounded picture of how financial information shapes investor psychology and market behaviour.

III. RESEARCH OBJECTIVES

1. To understand how financial news headlines shape and shift investor sentiment.
2. To explore the contrasting effects of positive versus negative news on actual investment decisions.
3. To assess how aware investors are of sentiment analysis as a tool for reading and predicting market behaviour.
4. To investigate the broader role that investor psychology plays in driving stock market movements.

IV. RESEARCH HYPOTHESES

H1: When investors encounter positive financial news, they are more inclined to purchase stocks.
H2: Negative financial news generates feelings of fear and hesitation among investors, making them reluctant to act.
H3: The tone and framing of news headlines genuinely mirrors the prevailing sentiment in the broader market.
H4: The psychological state of investors has a direct and significant influence on how stock markets move.
H5: Tools that analyse sentiment in financial news can meaningfully assist in forecasting stock market trends.

V. METHODOLOGY

5.1 Research Design

In this report we will be employing a quantitative research design to examine the association between financial news headlines and investor sentiment. The use of a quantitative design was selected due to the ability to "detect statistically significant responses from a broad range of participants and [performance of] comparisons. Our instrument was a standardized format questionnaire

5.2 Sample Size

The response to the questionnaire was from 100 participants that take an interest in financial news and may have some involvement in stock market investing. Convenience sampling was used to recruit the participants and 100 respondents were gathered, it is the only feasible way to get participants, but restricts the generalizability of the results.

5.3 Data Collection

Participants completed a standardised online questionnaire which they filled out on their own. The questionnaire assessed participants' news reading patterns, emotional reactions to various financial news types and opinions towards sentiment analysis as a financial market indicator.

5.4 Data Analysis

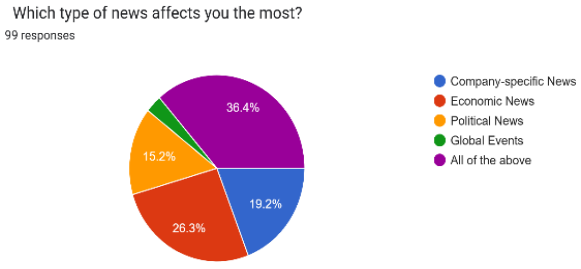
To make sense of the collected data, we used two key statistical techniques: * Descriptive Statistics (mean, median, standard deviation) to sum up respondent feelings about relevant questions.

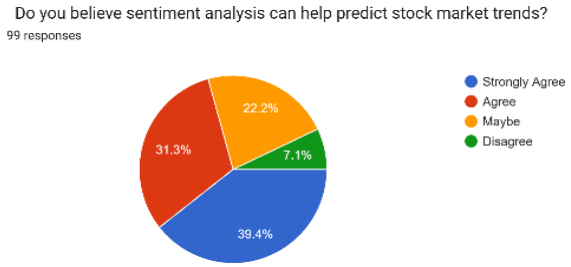
Correlation Analysis –
To examine how strong and in which direction the relations between certain variables are - e.g. do people who had a high response to positive news also have a high response to negative news?
Responses were gathered on a 5-point Likert scale where Strongly Agree was a 5 and Strongly Disagree was a 1.

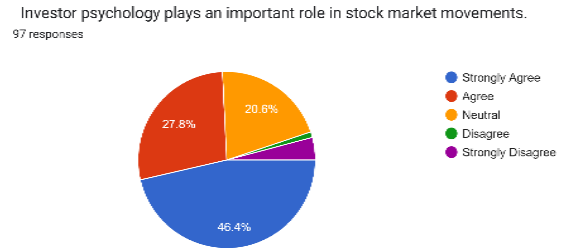
VI. DATA ANALYSIS AND FINDINGS

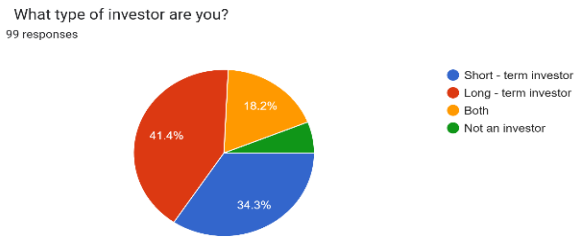
Our primary data came from 98 valid responses. Here is what participants told us and what the numbers behind their answers reveal.

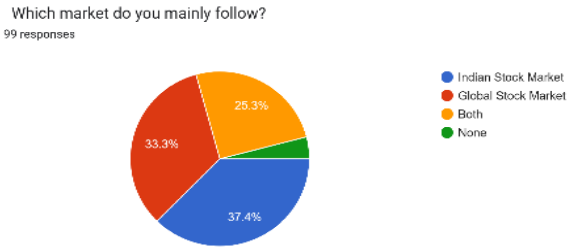
Survey Response Charts

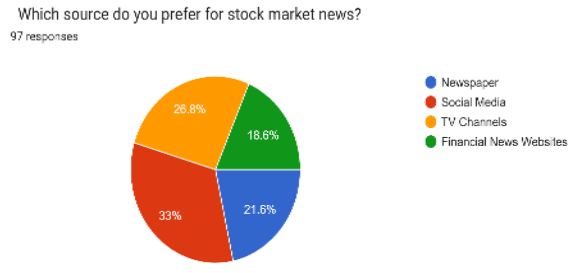


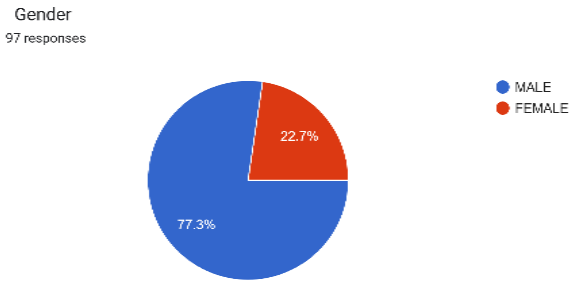


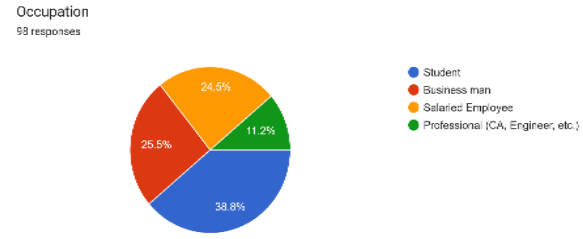


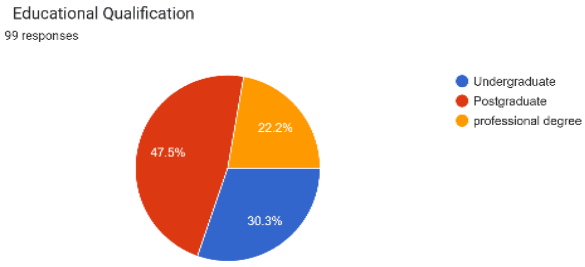












6.1 Descriptive Statistics

A summary of the industry participant responses to the five key statements relating to news, sentiment and investor psychology is given in the table below:

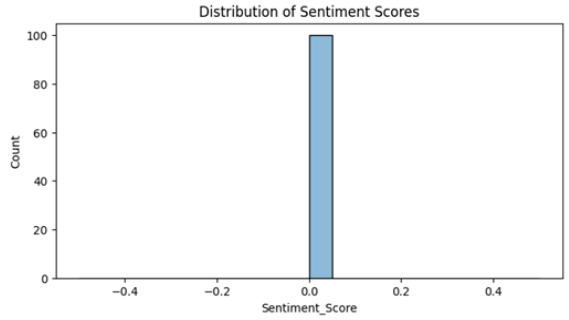
Variable	Mean	Median	Std. Dev.
Positive news makes me want to buy stocks	3.84	4	1.28
Negative news makes me nervous about investing	3.82	4	1.25
Sentiment analysis can predict market trends	4.03	4	0.95
News headlines reflect true market sentiment	3.94	4	1.04
Investor psychology drives market movements	4.11	4	1.04

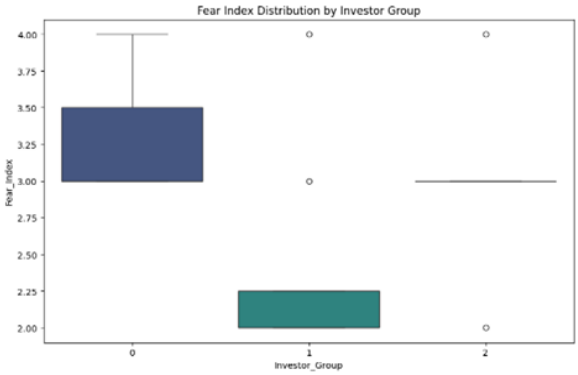
And what does this reveal? All the means are well above 3.0 so overall, respondents tended towards a degree of agreement to all five issues. The most prominent result is the highest mean response value of 4.11, which is given for whether investors' psychology plays a role in influencing the movement of stock markets clearly, respondents have a high awareness of the psychology fuelling stock markets, perhaps from prior experiential knowledge. The average standard deviations are also fairly low.

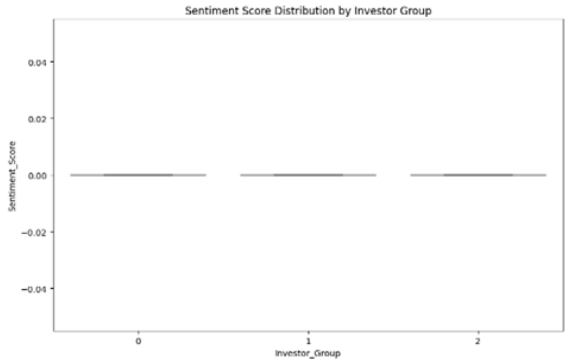
6.2 Correlation Analysis

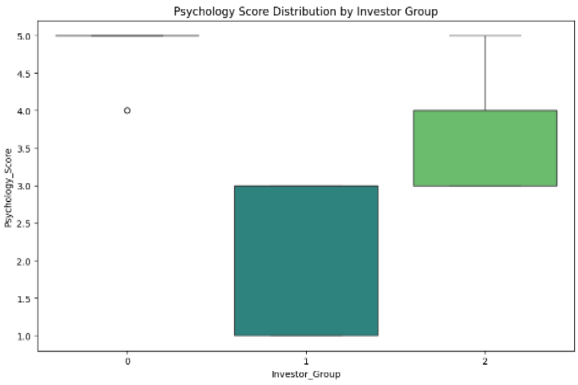
In order to understand the relationships between the various news/sentiment dimensions, we calculated a correlation matrix. Below is what we found:

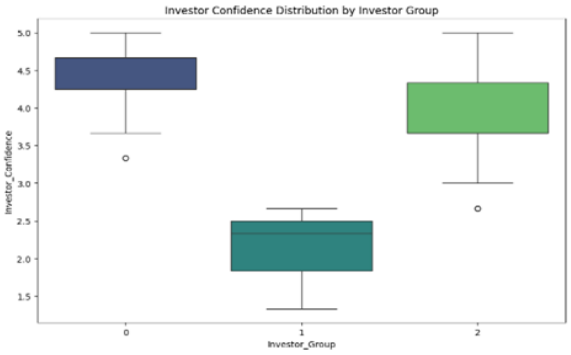
Variables	Pos. News	Neg. News	Sentiment	News Reflects	Inv. Psych.
Positive News	1.00	0.73	0.48	0.44	0.37
Negative News	0.73	1.00	0.52	0.46	0.42
Sentiment Prediction	0.48	0.52	1.00	0.63	0.58
News Reflects Market	0.44	0.46	0.63	1.00	0.61
Investor Psychology	0.37	0.42	0.58	0.61	1.00

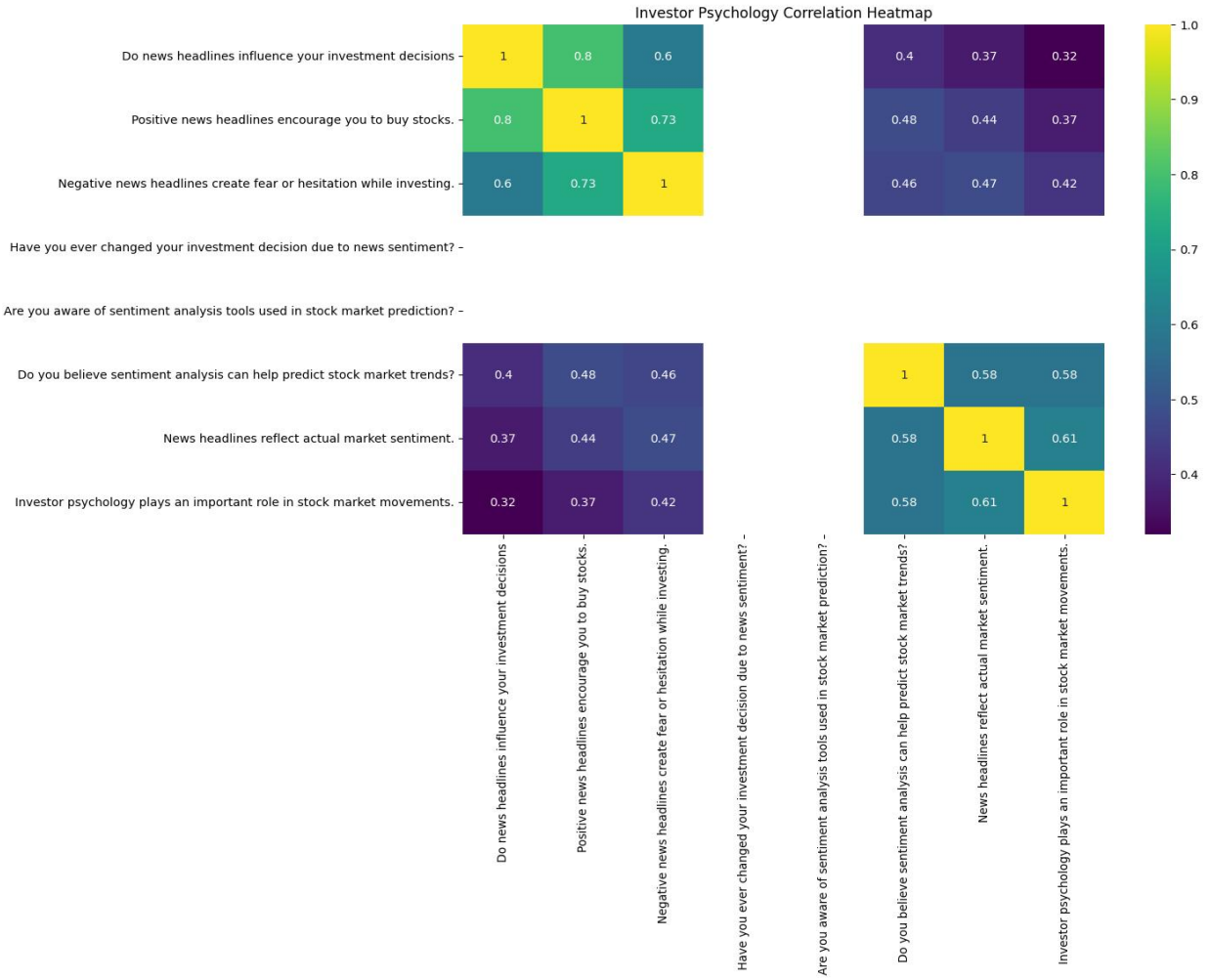












Reading the correlation table:

- Relationship between positive and negative reactions not inverse (r = 0.73): Investors who are emotionally responsive to positive news are also responsive to negative news; strong preference for emotional investment appears to be a trait that extends into both types.
- Moderate association between news and sentiment prediction (r=0.63): People that think that the news reflects true market sentiment also tend to agree that sentiment analysis can help predict market outcome. Their view of the news as a good indicator carries into the analytical tools built on it.
- psychology and sentiment are related(r=0.61): Investors who think mental aspects are important for markets give higher weight to sentiment-based predictions-possibly because they have an intuitive feeling that mood affects markets.

So, these consistencies reinforce one story: sentiment in financial news, investor psychology, and the applicability of sentiment analysis is not an isolated phenomenon, but a connected phenomenon.

6.3 Hypothesis Testing

Hypothesis	Result
H1: Positive financial news encourages investors to buy stocks	Accepted
H2: Negative financial news creates fear and hesitation among investors	Accepted
H3: News headlines reflect the overall sentiment of the market	Accepted
H4: Investor psychology plays a significant role in driving stock market movements	Accepted
H5: Sentiment analysis tools can meaningfully help predict stock market trends	Accepted

All five hypotheses had been confirmed by the results. This not just a statistical finding it also demonstrates the truth of how investors process financial information. Investors are not machines, simply analysing figures; their experience is also emotional, and emotion influences then in a way that affects the market.

VII. DISCUSSION

What, ultimately, is revealed here is something probably investors already feel; the extent to which the news will affect a person. A report on soaring profits might inspire confidence and lunge your savings into the market; bring an economic gloom story and you might just pull in your horns, reassess, and sell.

The correlation between reactions to good and bad information (0.73) is higher than you might expect. It indicates that a sensitivity to financial news is a general quality we are as sensitive to the bad as we are to the good. Investing emotionally sensitive to the news is a broader-based quality not one that switches between a bulls and bear market. This will have consequences for those who educate and inform investors, and may interest policy makers in the role of information environments.

The result that investor psychology was the only topic ranked above 4 (average=4.11) also supports the literature. Kahneman and Tversky loss aversion, De Long et al. (1990) model of noise traders, and Shiller (2000) irrational exuberance all suggest the same conclusions: markets are based on human minds, and human minds are irrational.

The positive attitude the firms demonstrated toward sentiment analysis tools is equally far from discouraging. With an average of 4.03 for the statement that sentiment analysis can be used to predict trends in the market, the investors certainly do not appear to be dismissive of data altogether rather, they seem intrigued by it. As the technology matures and becomes easier to utilize, there is good reason to believe that it could reliably supplement the conventional investment methods.

VIII. CONCLUSION

The purpose of this paper was to investigate a rather basic characteristic about how investors invest, and specifically to find out how news consumption influenced their investment choices. In the end, this is the kind of thing behavioural finance has been saying for a long time – psychology matters, sentiment matters, the information in which investors operate, it has a concrete impact on their behaviour.

Good news inspires confidence and makes us want to purchase. Bad news provokes fear and draws us back. These tendencies are not defects or illogical processes rather, they are fundamental parts of the human response to uncertainty and issues markets must perpetually contend with.

What is novel is the speed at which information moves through digital media and the magnitude of its influx, which amplifies reactions and makes them potentially far more volatile.

As a means of tackling this, sentiment analysis could be quite an appealing option not as a substitute for fundamental analysis, but in addition to it.

Assessing the atmosphere of financial data may enable investors and analysts to have a deeper understanding of the direction in which market sentiment is leaning.

The evidence indicates that the investor group is increasingly accepting of such tools: Finally, there is nothing academic about exploring the human nature of markets.

It is practical, it is essential and it is becoming ever more critical in a world where information good or bad moves at the speed of light.

IX. LIMITATIONS OF THE STUDY

1. We have 100 investors completing the questionnaire, this is a relatively small sample to enable us to generalise the findings to the rest of the investor population.
2. Participants provided all data themselves through a questionnaire – indicated behaviours are therefore based on the participants view of their own behaviours rather than their ‘real’ trading behaviours.
3. The market data used is investor perception, not actual market data therefore the study cannot make direct links between positive/negative news and market movement.

X. DIRECTIONS FOR FUTURE RESEARCH

This study opens several avenues for deeper exploration. Future researchers might consider:

- Studying more data with various timelines and regions, encompassing a broader spectrum of the human language in the analysis of financial news headlines. - Utilizing sophisticated machine learning and NLP algorithms to create sentiment models for further validation against real-world data.
- Using survey-based information together with actual trading records to close the gap between investor perceived and real behaviour.
- Studying the effects of social media sentiment (from sources such as Twitter, Reddit, financial forums etc.) on traditional news sentiment and how that affects market dynamics.

REFERENCES

[1] Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. Journal of Economic Perspectives, 21(2), 129–152.

[2] Tetlock, P. C. (2007). Giving content to investor sentiment: The role of media in the stock market. Journal of Finance, 62(3), 1139–1168.

[3] Tetlock, P. C., Saar-Tuschinski, M., & Mackesy, S. (2008). More than words: Quantifying language to measure firms' fundamentals. Journal of Finance, 63(3), 1437–1467.

[4] Bollen, J., Mao, H., & Zeng, X. (2011). Twitter mood predicts the stock market. Journal of Computational Science, 2(1), 1–8.

[5] Barber, B. M., & Odean, T. (2008). All that glitters: The effect of attention on the buying behaviour of individual investors. Review of Financial Studies, 21(2), 785–818.

[6] De Long, J. B., Shleifer, A., Summers, L., & Waldmann, R. (1990). Noise trader risk in financial markets. Journal of Political Economy, 98(4), 703–738.

[7] Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. Journal of Finance, 25(2), 383–417.

[8] Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–292.

[9] Shiller, R. J. (2003). From efficient markets theory to behavioural finance. Journal of Economic Perspectives, 17(1), 83–104.

[10] Lo, A. W. (2004). The adaptive markets hypothesis. Journal of Portfolio Management, 30(5), 15–29.

[11] Li, X., et al. (2014). Empirical analysis: Stock market prediction via extreme learning machine. Neurocomputing, 128, 136–144.

[12] Schumaker, R. P., & Chen, H. (2009). Textual analysis of stock market prediction using breaking financial news. ACM Transactions on Information Systems, 27(2), 1–19.

[13] Loughran, T., & McDonald, B. (2011). When is a liability not a liability? Journal of Finance, 66(1), 35–65.

[14] Das, S., & Chen, M. (2007). Yahoo! for Amazon: Sentiment extraction from small talk on the web. Management Science, 53(9), 1375–1388.

[15] Kearney, C., & Liu, S. (2014). Textual sentiment in finance. International Review of Financial Analysis, 33, 171–185.

[16] Nguyen, T., Shirai, K., & Valcin, J. (2015). Sentiment analysis on social media for stock prediction. Proceedings of the International Joint Conference on Natural Language Processing, 1354–1364.

[17] Oliveira, N., Cortez, P., & Areal, N. (2017). The impact of microblogging data for stock market prediction. Expert Systems with Applications, 61, 293–302.

[18] Fang, L., & Peress, J. (2009). Media coverage and the cross-section of stock returns. Journal of Finance, 64(5), 2023–2052.

[19] Garcia, D. (2013). Sentiment during recessions. Journal of Finance, 68(3), 1267–1300.

[20] Sprenger, T., & Welpe, I. (2011). Tweets and trades: The information content of stock microblogs. European Financial Management, 17(5), 1–25.

[21] Nofsinger, J. (2017). The Psychology of Investing. Routledge.

[22] Thaler, R. (2015). Misbehaving: The Making of Behavioural Economics. W. W. Norton & Company.

[23] Barberis, N., Shleifer, A., & Vishnay, R. (1998). A model of investor sentiment. Journal of Financial Economics, 49(3), 307–343.

[24] Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor psychology and security market under and overreactions. Journal of Finance, 53(6), 1839–1885.

[25] Engelberg, J., & Parsons, C. (2011). The causal impact of media in financial markets. Journal of Finance, 66(1), 67–97.
[26] Uhl, M. (2014). Reuters sentiment and stock returns. Journal of Behavioural Finance, 15(4), 287–298.
[27] Tetlock, P. (2011). All the news that's fit to reprint. Journal of Finance, 66(5), 1439–1467.
[28] Antweiler, W., & Frank, M. (2004). Is all that talk just noise? Journal of Finance, 59(3), 1259–1294.
[29] Kim, S., & Kim, H. (2014). Investor sentiment from internet message postings. Journal of Financial Markets, 17, 71–96.
[30] Smales, L. (2014). News sentiment and the investor fear gauge. Finance Research Letters, 11(2), 122–130.
[31] Poon, S., & Granger, C. (2003). Forecasting volatility in financial markets. Journal of Economic Literature, 41(2), 478–539.
[32] Chan, W. (2003). Stock price reaction to news. Journal of Financial Economics, 70(2), 223–260.
[33] Cutler, D., Poterba, J., & Summers, L. (1989). What moves stock prices? Journal of Portfolio Management, 15(3), 4–12.
[34] Baker, M., & Wurgler, J. (2006). Investor sentiment and cross-section of stock returns. Journal of Finance, 61(4), 1645–1680.
[35] Tetlock, P. (2010). Does public financial news resolve asymmetric information? Review of Financial Studies, 23(9), 3520–3557.
[36] Brown, G., & Cliff, M. (2004). Investor sentiment and stock market volatility. Journal of Empirical Finance, 11(1), 1–27.
[37] Dzielinski, M. (2012). Measuring economic uncertainty. Journal of Financial Economics, 103(3), 1–15.
[38] Fama, E., & French, K. (1992). The cross-section of expected stock returns. Journal of Finance, 47(2), 427–465.
[39] Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers. Journal of Finance, 48(1), 65–91.
[40] Shiller, R. (2000). Irrational Exuberance. Princeton University Press.
[41] Akerlof, G., & Shiller, R. (2009). Animal Spirits: How Human Psychology Drives the Economy. Princeton University Press.
[42] Lazer, D., Kennedy, R., King, G., & Vespignani, A. (2014). The parable of Google Flu. Science, 343(6176), 1203–1205.
[43] Liu, B. (2012). Sentiment Analysis and Opinion Mining. Morgan & Claypool Publishers.
[44] Pang, B., & Lee, L. (2008). Opinion mining and sentiment analysis. Foundations and Trends in Information Retrieval, 2(1–2), 1–135.
[45] Cambria, E., Schuller, B., Xia, Y., & Havasi, C. (2013). New avenues in sentiment analysis. IEEE Intelligent Systems, 28(2), 15–21.
[46] Feldman, R. (2013). Techniques and applications for sentiment analysis. Communications of the ACM, 56(4), 82–89.
[47] Hu, M., & Liu, B. (2004). Mining and summarizing customer reviews. Proceedings of the ACM SIGKDD Conference, 168–177.
[48] Bollen, J., Pepe, A., & Mao, H. (2009). Modelling public mood and emotion. Proceedings of the International AAAI Conference, 450–455.