

EFFECT OF SOCIAL MEDIA ON NEPALESE FINANCIAL MARKETS

A Dissertation submitted to the Office of the Dean, Faculty of Management
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by

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “Effect of Social Media on Nepalese Financial Markets”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Report of Research Committee

Mr. Bishnu Khadka has defended research proposal entitled “**Effect of Social Media on Nepalese Financial Markets**” successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Dr. Pitri Raj Adhikari and submit the study for evaluation and viva voce examination.

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Approval Sheet

We have examined the dissertation entitled “**Effect of Social Media on Nepalese Financial Markets**” presented by Bishnu Khadka, a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the viva voce examination of the candidate of the candidate. We hereby certify that the study acceptable for the award of degree.

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Abbreviations and Acronyms

ANOVA:	Analysis of Variance
ASE:	Amman Stock Exchange
CAPM:	Capital Asset Pricing Model
CBDC:	Central Bank Digital Currency
DF:	Degrees of Freedom
ICT:	Information and Communications Technology
ICT:	Information Communication Technologies
N:	News
NLP:	Natural Language Processing
RP:	Reels and Posts
SA:	Sentiment of Tweets Analysis
SLC:	School Leaving Certificate
SMEs:	Small and Medium Enterprises
TV:	Tweets Volume
TY:	Trending's Youtube
VIF:	Variance Inflation Factor

Abstract

This study investigates the Effect of Social Media on Nepalese Financial Markets by analyzing key factors such as Tweet, sentiment of tweets, reels and posts, trending YouTube content, and news mentions. With a dataset comprising responses from 389 participants, the research explores how these social media elements correlate with market movements. The study adopts a quantitative approach, utilizing tools such as frequency analysis, arithmetic mean, standard deviation, Pearson correlation, and regression analysis to examine the relationship between social media activity and financial markets. The results indicate a strong correlation between social media metrics and market trends, with factors like trending YouTube content and Tweet showing significant influence. A regression analysis reveals that these variables not only interrelate but also significantly affect financial markets, making social media a valuable predictive tool. The findings underscore the need for financial analysts and investors to integrate social media monitoring into their strategies, as shifts in online activity can provide early indications of market fluctuations. The study also presents policy implications, suggesting the importance of regulating social media's impact on market behavior.

Keywords: Tweet, Sentiment analysis, YouTube trends, Reels and posts, Financial markets

Chapter I

Introduction

1.1 Background of the study

The financial system is crucial for mobilizing capital needed for economic development, making it essential for management students to understand its components and structure. Key concepts include the process of fund transfer from surplus to deficit units, and the role of financial intermediaries. Financial systems encompass institutions, assets, markets, regulations, and authorities, with financial assets being traded in markets. These markets facilitate the exchange of physical and financial assets, channeling funds from surplus units (investors) to deficit units (firms and government). Financial markets also efficiently allocate capital and enhance consumer well-being. Various types of financial markets are classified based on the nature of instruments traded, market organization, instrument maturity, and political boundaries. They include debt and equity markets, organized exchanges and over-the-counter markets, money and capital markets, and domestic and international markets. Markets are also divided into primary and secondary markets, with the primary market raising new funds and the secondary market facilitating the trading of existing securities. Nepal Stock Exchange Ltd. is Nepal's sole secondary market, ensuring liquidity but not raising new capital (Paudel et al., 2023).

The study aimed to see how new media affects investment decisions for investors in the Amman Financial Market. It looked at important economic and financial information shared through new media. It also identified which new media types most influence investors' decisions. Investors in the Amman Financial Market use social media (60%) and specialized websites (40%) for information. Facebook is the most popular social media for investment advice, used by 51.3% of investors. The Amman Financial Market Website (ASE) is a key source for information, relied on by 78% of investors. New media, including social media and specialized websites, greatly affect investment decisions. Atoom et al. (2021) present social media and its elements are the one of the factors which can effect the financial markets.

Social media refers to web-based technologies that allow people to create, share and exchange information in virtual communities and networks. Social media differs from traditional media (newspapers, television and radio) in that it is relatively accessible, so anyone can publish information. From the point of view of corporate advertising,

corporate social media enables one-to-many communication for companies, which bypasses traditional media and allows the company to convey the intended message to a large network of interest groups. For businesses looking to use social media as a communication channel, social media technology and standards have evolved over time (Lee et al., 2015).

Chen et al. (2023) presented the new ideas, Social media has become a means of communication, but it is also a valuable database for researchers and professionals to gather information, share information and express opinions about the evolution of stock prices. Emotions in social media content can be analyzed to predict stock performance. Although many previous studies have attempted to predict stock price movements using social media sentiment, some new analytical tools such as current vocabularies may require further testing and validation in the context of financial decision making.

Social media has become the fastest-moving industry in the world. Companies can grow faster, find new customers more quickly, and increase their wealth and knowledge by reaching people globally. This was not possible several decades ago when print, radio, and television advertising were the primary forms of marketing for most companies. A company's reach was limited by its budget, and it had no control over how many times the target audience listened to or viewed the content provided. Well, not anymore. One of the most powerful features of social media is the way it connects people around the world in seconds. It doesn't matter where one is, as long as there is a working internet connection and a device to view content, connection is possible. This has been an incredible advantage for businesses. Imagine the business potential if millions of customers worldwide can now be reached. A lot has changed since the inception of a company's social media presence. Even if a company has only been active on social media for a few months, there are definitely different trends now than before. Keeping up with these trends will make a business a successful social media influencer. Once the trends and their popularity are understood, businesses can adapt their content to fit the current narrative. As preparations are made to implement the necessary changes to social media accounts, it is important to understand that this is something that needs to be done on a regular basis. This will keep the company as a trusted source in its niche and show the audience that the company understands what it is doing in a particular field (Smith., 2022).

Carosia et al. (2020) shared that the Efficient Market Hypothesis, financial market movements are dependent on news and external events that have a significant impact on the market value of companies. Thus, a great amount of applications has arisen to explore this knowledge through automatic sentiment and opinion extraction. The technique known as Sentiment Analysis (SA) aims to analyze opinions, sentiments, and emotions present in unstructured data, leading many papers to address the impact of news and social media publications on the financial market.

Therefore, this study examines the effect of social media on the Nepalese financial markets.

1.2 Problem statements

The rapid growth and incorporation of social media into everyday life is recognized and social media analysis has become a popular research topic. Several employees belonging to the several departments, especially the IT department reported that developments like Web 2.0 with social media tools like Facebook and Twitter have changed the strategic views of the senior management team as well as customers (Edwin et al., 2014). However, an area that still offers room for research concerns how social media content affects other real-life time-dependent events.

Recent studies using social media and stock market data have focused primarily on predicting stock returns. Instead of predicting stock price movements, we examine the relationship between Facebook data and investors' stock market decisions using unique data from Nokia's investment transactions. This found that buying and selling decisions are linked to Facebook data, especially for inactive households and also for non-profits. At the same time, sophisticated investors, financial and insurance institutions seem to act independently of Facebook's actions (Siikanen et al., 2018).

Some research did study the impact of social media on investment decisions. For example, one research done by Rui Fan (2019) studied the Social media bots and stock markets focusing on investigating through independent variables of social media, and they are: News, stock message boards, twitter information intermediaries, and social media bots (Fan et al., 2019). Significant relationships between bot tweets and stock returns, volatility, and trading volume at both daily and social media bots. In addition, another research done by Al-toom (2021) examined the effect of social media on making investment decisions for investors in the Amman financial market. The results of the first main hypothesis test showed a strong and positive correlation

of 90.4% between new media, represented by its applications (social networking sites and specialized economic and electronic realities), and investment decision-making and rationalization among investors in the Amman Financial Markets (Atoom et al., 2021). No study has been found that focuses on the effect of social media on investment decisions specifically in the Swedish stock market (Bernson, 2010). Thus, this study attempts to fill this knowledge gap. The study is also conducted based on these research questions:

- i. How do the current metrics of Tweet, sentiment, reels and posts, trending's youtube, news compare in the Nepalese financial market?
- ii. What are the relationship among financial markets with Tweet, sentiment, reels and posts, trending's youtube and news?
- iii. In what ways does effect Tweet, sentiment, reels and posts, trending's youtube, news on financial markets?

1.3 Objectives of the study

The main objective of this study is to evaluate and investigate the effect of social media on financial markets and other specific objectives are as follows:

- i. To assess the current status of Tweet, sentiment of tweet, reels and posts, trending's youtube and news.
- ii. To examine the relationship between social media and financial markets in Nepal.
- iii. To analyze the effect of social media on financial markets in Nepal.

1.4 Rational of the study

The main purpose of this study is to look at social media and find out if it has impact on financial markets. The purpose of the study is to first find out if there is a relationship between social media and the financial market, and then to find out which factors affect the trading of financial assets in the financial market, bond decisions, investment decisions. and elections in general. if they want to invest. The purpose of the study is also to increase knowledge in the field of behavioral finance. The outcome of this study will further assist other researchers in paving the way for additional studies in the area of the topic under study. Additionally, a potential benefit of this study is that it could investigate the impact of social media on financial markets. Researchers, students, and individuals interested in more in-depth research

will find this study to be beneficial. Similarities aside, financial institutions and investors also might benefit from this study.

1.5 Hypostudy

The following hypostudy have been developed from above mentioned research questions. Thus, this research attempt to test following hypostudy:

H1: Increasing Tweet has a positive impact on financial markets.

H2: Positive sentiment of tweets positively influences financial markets.

H3: Higher engagement with reels and posts is positively related to financial market performance.

H4: Trending YouTube content has a significant positive effect on financial markets.

H5: Increased news coverage related to financial markets positively affects market performance.

1.6 Limitations of the study

The following limitations are noted in this study of the effect of social media on financial markets.

- i. The study is based on primary data. Therefore, from a psychological point of view, it has the limitation of imprecision and inadequacy.
- ii. The study focuses only on the social media and financial markets and does not covers other aspects rapid changes in social media platforms and technologies.
- iii. The validity of information from secondary sources depends on the reliability of the reports and sources.
- iv. Possible limitations of the statistical tools and methods used to analyze the data.
- v. There are limitations to the application of research results to all financial markets or different geographic regions.
- vi. Due to the quality of some data, it is difficult to accurately determine the impact of social media on stock volatility, trading volume, Tweet, sentiment, bot activity, retweets, news and mentions

Chapter II

Literature Review

This chapter has three sections. The first section is theoretical review, the second is empirical review and third is research gap.

2.1 Theoretical Review

Efficient Market Hypostudy (EMH)

The Efficient Market Hypostudy (EMH) itself was developed by economist Eugene Fama in the 1960s. The concept of revisiting or re-evaluating the EMH in the context of social media and modern information dissemination has been addressed by various researchers and scholars over time, rather than being attributed to a single individual. Researchers in finance and economics have expanded on Fama's original theory to incorporate the effects of social media and other modern information channels, examining how these new factors influence market efficiency. The Efficient Market Hypostudy (EMH) posits that financial markets are "informationally efficient," meaning that asset prices always reflect all available information. However, the advent of social media challenges this traditional view, necessitating a revisited EMH. Social media platforms rapidly disseminate vast amounts of information, including rumors, opinions, and news, which can introduce noise and irrational behavior into the market. This can lead to overreactions or under reactions, thereby creating temporary inefficiencies. By revisiting the EMH in the context of social media, we can better understand how these platforms impact market dynamics and question the assumption of perfectly efficient markets.

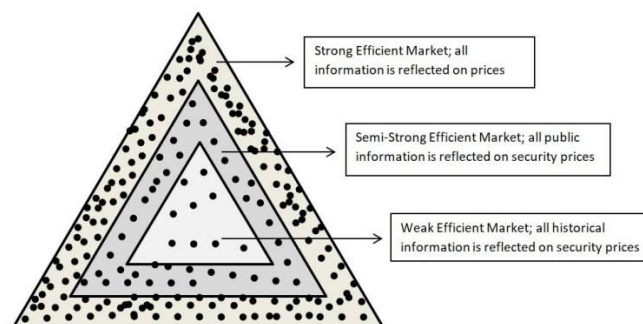


Figure 1 Efficient Market Hypostudy

Media Agenda-Setting Theory

The Media Agenda-Setting Theory was developed by Maxwell McCombs and Donald Shaw in the 1970s. They introduced this theory through their seminal study on the

1968 presidential election, which demonstrated that the media significantly influenced the public's perception of important issues. Their research showed that the issues emphasized by the media were perceived by the public as the most important, thereby setting the agenda for public discourse. The Media Agenda-Setting Theory posits that the media doesn't tell people what to think, but rather what to think about by highlighting certain issues and topics. In the context of social media, this theory is particularly relevant as platforms like Twitter, Facebook, and Reddit can rapidly elevate specific financial news, trends, or events to prominence. This can shape investors' focus and priorities, influencing their decision-making processes and market behavior. By determining the agenda, social media can sway collective attention and drive market movements, thus playing a crucial role in financial market dynamics.

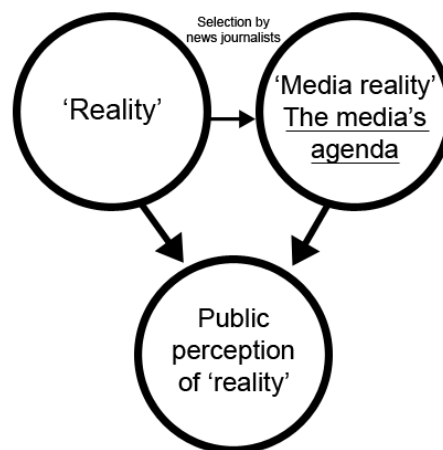


Figure 2 Media Agenda-Setting Theory

Network Theory

Network theory, which examines the structure and dynamics of networks and their influence on behavior and outcomes, has roots in multiple disciplines, including sociology, mathematics, and computer science. One of the foundational figures in the development of Network theory is mathematician Paul Erdős, who, along with Alfréd Rényi, developed the Erdős-Rényi model of random networks in the 1950s and 1960s. Sociologist Mark Granovetter also made significant contributions with his work on the strength of weak ties, illustrating the importance of network connections in social and economic contexts. These foundational works laid the groundwork for understanding how networks influence various systems, including financial markets influenced by social media networks.

Information Cascade Theory

Information Cascade Theory was developed by economists Sushil Bikhchandani, David Hirshleifer, and Ivo Welch in the early 1990s. This theory explains how individuals make decisions based on the observations of others, especially in uncertain situations. When people observe the actions of others and make decisions that align with the majority, an information cascade can occur, where subsequent individuals ignore their own information and follow the crowd. In financial markets, social media can facilitate such cascades by rapidly spreading information (or misinformation), leading to collective behavior that can significantly impact market dynamics. Understanding information cascades is crucial for analyzing how trends and rumors on social media can influence investor behavior and market outcomes.

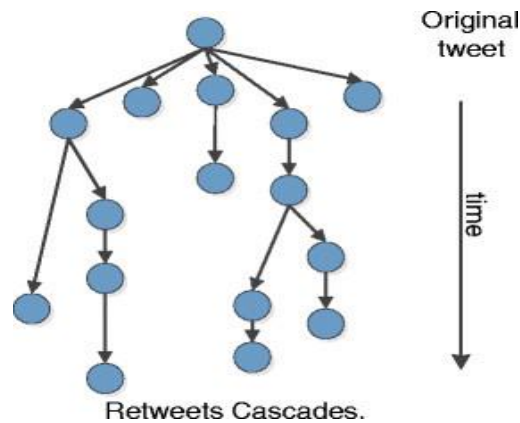


Figure 3 Information cascade on tweets

Behavioral Finance

Behavioral Finance, as a distinct field, was developed through the contributions of several key researchers who integrated psychology with economic and financial theory. Two of the most influential figures in the development of Behavioral Finance are Daniel Kahneman and Amos Tversky. Their pioneering work on cognitive biases and prospect theory laid the foundation for understanding how psychological factors affect economic decision-making. Additionally, Richard Thaler played a significant role in advancing the field by exploring how human behavior deviates from traditional economic theories, particularly through his work on mental accounting, endowment effect, and other behavioral concepts. These contributions collectively helped establish Behavioral Finance as a critical area of study in understanding investor behavior and market anomalies. Behavioral Finance is essential for your study theoretical review on the "Effect of Social Media on Financial Markets" because it provides a framework to understand how social media can amplify cognitive biases

and emotions among investors. By incorporating Behavioral Finance, you can analyze how information and sentiments shared on social media platforms influence investor behavior, leading to phenomena such as herd behavior, overreaction, and market volatility. This perspective is crucial for explaining deviations from the efficient market hypothesis and understanding the impact of social media on financial markets.

2.2 Empirical review

Edwin et al, (2014) analyzed the impact of information communication technologies (ICT) on the strategic management of financial institutions. The authors argue that ICTs, including social media, play a crucial role in enhancing the operational efficiency and competitive advantage of financial institutions. The paper discusses how ICTs facilitate better decision-making, improve customer service, and enable innovative financial products and services. The authors also address the challenges of integrating ICTs into financial institutions, such as high implementation costs and the need for skilled personnel. The paper concludes that successful adoption of ICTs, including social media, can significantly enhance the strategic management and overall performance of financial institutions.

Hu and Tripathi. (2016) investigated the impact of social media and news media on financial markets. The authors analyze how information disseminated through these media channels affects stock prices, trading volumes, and market volatility. Using empirical data, the study shows that social media and news media significantly influence investor behavior and market outcomes. The authors highlight that social media, in particular, can lead to rapid information diffusion and collective decision-making, sometimes resulting in market overreactions. The paper suggests that investors and financial analysts should consider social media sentiment and news trends in their market analyses and decision-making processes.

Cwynar et al. (2019) explored the use of social media as an information source among financial market professionals in Poland. The authors conduct a survey to understand how these professionals utilize social media for market analysis and decision-making. The findings indicate that social media is increasingly recognized as a valuable tool for gathering real-time market information, monitoring investor sentiment, and identifying emerging trends. The paper highlights the advantages of social media, such as speed and accessibility, but also notes the potential risks, including the spread

of misinformation and the difficulty of verifying sources. The authors conclude that while social media is a useful complement to traditional information sources, financial professionals must critically assess the information obtained from these platforms.

Chen et al.(2023) conducted the impact of Twitter sentiment on stock performance using a decision tree approach. By analyzing tweets related to publicly traded companies, they employ natural language processing techniques to classify sentiment as positive, negative, or neutral. Their decision tree model reveals a significant correlation between Twitter sentiment and stock price movements, with positive sentiment generally leading to stock price increases and negative sentiment leading to declines. The study highlights that this relationship varies by sector, being more pronounced in technology and consumer goods than in utilities and healthcare. The authors also note that major events, such as earnings reports and product launches, amplify the influence of Twitter sentiment on stock prices. This research suggests that investors can enhance their strategies and manage risks by incorporating Twitter sentiment analysis, and it underscores the importance for companies to be aware of their social media impact on stock performance.

Fan et al.(2019) examined the influence of social media bots on stock markets. The authors identify bot activity on Twitter and analyze its impact on stock prices and trading volumes. They find that bots significantly influence market behavior by amplifying existing trends, leading to increased volatility. The study highlights the need for regulatory measures to address the challenges posed by social media bots in financial markets.

Tan and Tas. (2020) evaluated the impact of social media sentiment on international stock returns and trading activity. Using sentiment analysis on Twitter data, the authors find that positive social media sentiment is associated with higher stock returns and increased trading volumes. The effect is more pronounced in emerging markets compared to developed ones. The study underscores the importance of considering social media sentiment in investment strategies.

Valle et al. (2021) compared the impact of Twitter sentiment on stock market decisions during the H1N1 and COVID-19 pandemics. Using sentiment analysis on Twitter data, the authors find that Twitter sentiment significantly affects stock market indices during both pandemics, with a more pronounced effect during COVID-19. Negative sentiment correlates with market declines, while positive sentiment

stabilizes the market. The study highlights the role of social media sentiment in financial decision-making during crisis periods.

Jiao et al. (2020) investigated the combined impact of social media and news media on stock market behavior. Using a dataset of social media posts and news articles, the authors employ machine learning to classify sentiment and regression models to assess the impact on stock returns and volatility. They find that both media types significantly influence stock markets, with social media having a more immediate but short-lived impact, while news media effects are more sustained. The interaction between the two can amplify market reactions.

Hussain, (2024) found to understanding the broader impact of digital technologies, including social media, on financial institutions. While your study focuses on the effect of social media on financial markets, this paper's insights into digital banking services' influence on bank performance can provide complementary perspectives on how digital innovations are reshaping the financial industry. The research findings indicated that an increase in online banking transactions was favorably and strongly correlated with profitability. The study found that profits increased as a result of digital banking. Increased commercial bank online customer deposits, combined with an increase in online customer deposits, resulted in increased bank profitability.

Khan et al. (2022) investigated the impact of sentiment analysis on stock market prediction by collecting data from social media, Yahoo Finance, and financial news sources. They implemented a hybrid algorithm to enhance prediction accuracy, addressing aspects like feature selection and spam tweets reduction. The preprocessing phase ensured data quality, followed by sentiment analysis to evaluate public sentiment. The study found that social media data achieved a prediction accuracy of 80.53%, while financial news data reached 75.16%. Notably, the New York and Red Hat stock markets were challenging to predict. In contrast, New York and IBM stocks were more influenced by social media, and London and Microsoft stocks by financial news. The random forest classifier showed the highest consistency, achieving an accuracy of 83.22% through its ensemble approach. This research underscores the significant role of sentiment analysis in predicting stock market trends, with distinct influences across different stocks and markets.

Ahmadi, (2024) provided a thorough examination of how big data and artificial intelligence (AI) were transforming the financial industry, highlighting both current impacts and future opportunities. The study reviewed a broad range of literature on

the integration of these technologies, emphasizing their role in enhancing data analysis, risk management, and decision-making processes. Ahmadi discussed how big data analytics and AI algorithms enabled financial institutions to process vast amounts of information swiftly, uncovering patterns and insights that traditional methods might miss. This integration facilitated more accurate market predictions, personalized customer experiences, and improved operational efficiency. The literature also explored challenges such as data privacy concerns, ethical considerations, and the need for robust regulatory frameworks. Ahmadi concluded that the continued advancement of big data and AI held significant promise for the financial sector, offering innovative solutions and driving competitive advantages. The study underscored the necessity for financial institutions to adapt and invest in these technologies to capitalize on emerging opportunities and stay ahead in the evolving market landscape.

Table 1
Summary of Review Literature

S.N	Authors (s)	Variables	Methodology	Major findings
1	Bollena et al.(2011)	Tweet Data Mood assessment tools (positive vs negative, calm, happy, sure, kind) Z- score normalizations	Granger Causality Analysis / correlation Mood Assessment	Our results indicate that the accuracy of DJIA predictions can be significantly improved by the inclusion of specific public mood dimensions but not others. We find an accuracy of 86.7% in predicting the daily up and down changes in the closing values of the DJIA and a reduction of the Mean Average Percentage Error (MAPE) by more than 6%.
2	Okiro &Ndungu (2013)	information production and contemporary banking theory Innovation diffusion theory	Quantitative (Descriptive statistics)	Commercial banks constituted 56.7%; Saccos were 36.5%, whereas micro finance institutions were 6.7% of the total sample.
3	Venekateswara et al.(2014)	Consumer interest Generated media Levels of Engagement in Social Networks	Data collections Social Media Engagement Analysis Customer Interaction and Feedback	Increased integration of financial products with established social networks presents opportunities for financial services companies. Most social media users are close to the age of 35 years Social media is a relatively recent phenomenon in India
	Agwu et al.(2014)	Strategic Management in Organizations Application of ICT to Strategic	Qualitative Approach(historical facts, interviews and case study methods.)	Several employees belonging to the several departments, especially the IT department reported that developments like Web 2.0 with social media tools like Facebook

		Management		and Twitter have changed the strategic views of the senior management team as well as customers More than eighty percent of the top managers stated that ICT has greatly improved the strategic and operational management of their banks
5	LEE et al. (2015)	product recall announcement control variables (controls for media other than corporate social media, controls for recall characteristics, and controls for firm characteristics)	Multiple Regression analysis	we find that corporate social media, in general, attenuates the negative price reaction to product recall announcements. As social media evolved from less to more interactive channels, firms lost complete control over the content appearing on their corporate social media. The benefits and the costs of social media within the context of corporate disclosure.
6	Tianyou Hu & Arvind Tripathi (2016)	Bullishness Index Positive News Sentiment Negative News Sentiment Agreement Index	Regression Analysis	Results show that sentiments on online investor forums do not seem to mirror the ones from news media. Instead, the sentiments in these two platforms differ from each other. It is shown that raw returns are not significantly related to sentiment from news media. raw returns are significantly positively related to Bullishness
7	Liu et al. (2018)	New media Stock market	panel regression model	A media effect exists in new media channels: trading volume and turnover ratio are positively related to activities in new media, while stock return is negatively related; a reversal effect is also revealed.
8	Cwynar et al. (2019)	Dependent variable (the use of social media for job-related, informational purposes—is nominal (1–used; 0–not used) Independent variables (firm-specific variables, respondent-specific variables, information needs perception variables)	A binary choice logit model	Decision-makers representing these institutions seldom use social media for job-related purposes. However, the professionals from institutions that manage more diversified asset portfolios and hold the riskiest assets in the portfolios, are more likely to use social media for information purposes. We also found that the value of assets does not affect the use of social media for information purposes among financial market professionals in Poland
9	Broadstocka et al. (2019)	sentiment data (Web rape twitter)	Capital Asset Pricing Model (CAPM) to analyze the relationship between stock returns and sentiment data derived from social	The results are slightly mixed, subject to the diversity among the stocks under investigation, they unambiguously demonstrate the pricing power of sentiment extracted from social-media

10	Fan et al. (2019)	News, stock message boards, Twitter information intermediaries, and social media bots Psychological bias, the spread of information, and impacts of news among and on investors	Regression method	edia. we find significant relations between bot tweets and stock returns, volatility, and trading volume at both daily and intraday levels. These results are also confirmed by an event study of stock response following abnormal increases in the volume of tweets.
11	Jiaoa et al. (2020)	Trading activity and the realized idiosyncratic return volatility of each stock.	Multiple Regression analysis autoregressive conditional heteroscedasticity (ARCH) models GJR-GARCH model	High social media coverage at the stock level predicts high subsequent return volatility and trading activity, while high news media coverage predicts the opposite
12	Carosia et al. (2020)	Efficient Market Hypostudy financial market movements	Sentiment Analysis Module	This paper presented the impacts of the predominant sentiment in the social media Twitter in the Brazilian stock market movements. Among the Machine Learning techniques evaluated, the best technique for SA in Portuguese was the MLPs, which presented better results regarding accuracy and F1-score. This study also showed that it is possible to verify an association between the predominant sentiment in social media and stock market movements within three perspectives: absolute number of tweets sentiments, sentiments weighted by FAVs and sentiments weighted by number of RTs.
13	Awan et al., (2020)	Stock Price (open, low , high, close , adj close , volume) Companies (apple, yahoo, amazon, Facebook etc.)	Data collection Data Processing Sentiment Analysis Machine learning model (Linear Regression, eneralized Linear Regression, Decision Tree, Random Forest , Naive Bayes , Logistic Regression)	Linear Regression: Accuracy of 95% for predicting stock prices. Generalized Linear Regression: Accuracy of 97%, providing more accurate predictions than LR. Random Forest: Accuracy of 89%, better than DT but less than GLR. Decision Tree: Accuracy of 37%, the least accurate model. Naive Bayes: Provides approximately 60-70% accuracy in sentiment analysis. Logistic Regression: Provides 60-80% accuracy in sentiment analysis.
14	Selin Duz Tan & Oktay Tas (2020)	Investor sentiment Twitter activity Stock performance indicator	Data Collection Analytical model (Regression Analysis , Fama-MacBeth Regressions)	Twitter Activity and Trading Volume (The number of tweets (Ntweet) has a statistically significant positive effect on abnormal turnover (trading volume) on the same day (t),

				<p>Ntweett1 (number of tweets lagged by one day) also shows a positive and significant relationship with abnormal turnover (trading volume) on the next day.)</p> <p>Twitter Sentiment and Trading Volume (Twitter sentiment (Twitter) positively correlates with contemporaneous trading volume., Twitter sentiment from the previous day (Twiitter1) positively predicts trading volume on the subsequent day.)</p> <p>Twitter Activity and Stock Returns (he number of tweets (Ntweet) is positively associated with stock returns on the same day (t), except for S&P 350 Europe stocks.)</p> <p>Twitter Sentiment and Stock Returns (Twitter sentiment (Twitter) is strongly positively associated with stock returns on the same day across all regions.)</p>
15	Khan et al. (2020)	Sentiment analysis Stock market prediction Feature selection Spam tweets reduction Stock market volatility Hybrid algorithm	Data collection (Social media data, Yahoo Finance stock data, Financial news data, Yahoo Finance stock data,) Preprocessing Sentiment analysis Hybrid Algorithm	<p>ne results show that the prediction accuracy is achieved at 80.53% and 81.16% when using social media and financial news. Show that it is difficult to predict the stock markets of New York and Red Hat, New York and IBM are more influenced by social media, while London and Microsoft are influenced by financial information.</p> <p>Random forest classifier is found to be consistent and highest accuracy of 83.22% is achieved by its ensemble</p>
16	Atoom et al. (2021)	Independent variables (Specialized economic websites and Social media)	Descriptive analytical approach	<p>The results of the first main hypostudy test showed that there is a strong and positive correlation of (90.4) between the new media represented by its applications (social networking sites - specialized economic and electronic realities) and investment decisionmaking and rationalization among investors in Amman Financial Markets.</p>
17	Cruz et al.(2021)	The polarities of financial market indicators Posts on Twitter by applying a date shift on tweets	fundamental and technical financial analysis correlations	<p>The markets reacted 0 to 10 days after the information was shared and disseminated on Twitter during the COVID-19 pandemic and 0 to 15 days after the information was shared and disseminated on Twitter during the H1N1 pandemic.</p> <p>We identified an inverse relationship: Twitter accounts presented reactions to financial market behavior within a period of 0 to 11 days during the H1N1 pandemic and 0 to 6 days</p>

18	Ren et al. (2021)	Media biases The role of social media in financial markets	Regression model	<p>during the COVID-19 pandemic. We also found that our method is better detecting highly shifted correlations using SenticNet compared with other lexicons. With SenticNet, links can be seen even on the same day as twitter posts.</p> <p>Social media does influence mass media sentiment emergence for financial news.</p> <p>The sentiment consistency between social media reaction and prior news articles amplifies the persistence of mass media sentiment over time.</p> <p>By contrast, we found limited evidence of social media reducing the persistence of mass media sentiment over time.</p>
19	AGARWAL et al. (2021)	Twitters information or sentiments	Collections of social media and stock market data and analysis Sentiment Analysis	<p>The results from the Banking and Financial services sector show that there exists a significant relationship between the social media information and their stock market performance, indices related to these sectors are analyzed further for quantifying such effect.</p> <p>The findings of this paper reveal that the impact of the Twitter information on the performance of the broad indices of the Indian equity markets is not significant. The robustness of the results has been confirmed by using another algorithm for the sentiment analysis.</p> <p>There exists no significant correlation between the Twitter sentiments and the broad market indices (Nifty 50) of the Indian stock markets.</p>
20	Simon Malesev & Michael Cherry (2021)	Brand Awareness and Perceived Quality Access to Market Information Adaptation to Market Changes	Qualitative (questionnaire)	<p>Deficiencies in External Environment Analysis:</p> <p>(SMEs in the residential construction sector acknowledge rapid industry changes but often fail to conduct thorough external environment analyses.)</p> <p>Changes to Marketing Communication Strategies (There is widespread adoption of digital and social media marketing strategies among SMEs, driven by cost-effectiveness, speed, and customer preference., Social media platforms like Facebook and Instagram are widely used, but there's a lack of expertise in maximizing their potential for customer engagement</p>

and sales conversion.)

Trends in Marketing Communication Objectives (The primary objective of digital and social media marketing for SMEs is lead generation and online visibility, aimed at driving customer inquiries and website visits., Brand awareness is not a significant focus among respondents, indicating a potential gap in strategic marketing maturity.)

21	Mehta et al. (2021)	Sentiment variables Financial variables Social media	Machine-learning and deep-learning methods Vector Machine, MNB classifier, linear regression, Naïve Bayes and Long Short-Term Memory	We sought to identify how movements in a company's stock prices correlate with the expressed opinions (sentiments) of the public about that company.
22	Yizhi Wang et al.(2022)	Financial market variables using a variety of quantitative techniques	The DCC-GARCH model, wavelet analysis, and the VAR model (SVAR structural shock analysis) are the three most popular and straightforward methodologies	CBDC indicates have a negative relationship with the volatilities of the banking sectors, stock markets, and USEPU. CBDC indices have a positive relationship with the volatilities of cryptocurrency, foreign exchange and bond markets, as well as VIX and Gold.
23	Chen et al. (2023)	sentiment scores Twitter sentiment and financial market	Decision Tree Approach Regression model analysis	A multiple linear regression model using NRC-based sentiment scores as independent variables and stock price as the dependent variable showed acceptable predictive capability for stock prices of AAPL, GOOG, MSFT, and NFLX. The model's adjusted R ² was 0.14 with p < .001. Positive sentiment scores greater than or equal to 1.4 were likely to result in a decrease in stock price, whereas 88% of the remaining tweets were likely to be associated with an increase in stock price. High scores of anticipation, surprise, and trust, along with low scores of fear, anger, and negative sentiment, were more likely to predict a stock price increase.
24	Sina Ahmadi(2024)	AI impact on financial service Integration of Big Data and AI in financial processes Specific financial business applications Block chain	Quantitative cross-sectional approach through a survey to evaluate the influence of Big Data and AI in the Financial industry and current and future opportunities	The main findings of the research indicated that the integration of AI and Big Data into the finance industry increased the current opportunities, such as increased business rates, customer satisfaction, less pricey, less time consuming, scam detection and

25	Aamir Hussain (2024)	technology Role of Big Data in the financial sectors Independent (Digital banking) Dependent (financial performance)	Quantitative research approach (cross-sectional survey, online survey) Multiple regression analysis to examine how digital banking affects financial performance	management credibility, and creation of new opportunities in the industry. The research findings indicated that an increase in online banking transactions was favorably and strongly correlated with profitability. The study found that profits increased as a result of digital banking. Increased commercial bank online customer deposits, combined with an increase in online customer deposits, resulted in increased bank profitability.
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2.3 Research Gap

Social median effect on financial markets, there are still some areas that need more research. First, most studies only look at short-term effects, so we don't know much about how social media impacts the markets in the long run. It need to study more social media platforms like youtube trending's, Reels Reddit, Facebook, and TikTok, not just Twitter, to see how each one influences the markets differently. Another important area that needs more research is how fake news and misinformation cause market instability. This study need better ways to detect and manage these issues. Additionally, current research often overlooks how social media affects different types of markets and regions in different ways. Finally, it need to understand better how social media sentiment interacts with other factors like economic indicators and political events. Addressing these gaps will give us a clearer and more complete understanding of how social media influences financial markets.

Chapter III

Research Methodology

This chapter is divided into seven distinct sections. The first section is research design. Population and sample, and sampling design, nature and source of data, and the instrument of data collection procedure, methods of analysis and research framework and definition of variables respectively.

3.1 Research design

Descriptive and causal comparative research designs are used to achieve the objectives of this study. Descriptive research is used to collect relevant data and to identify facts. This type of survey is usually used to summarize the current state of affairs and events while assessing the beliefs, practices and characteristics of a given community. The effects of social media on financial markets is a mixed-methods approach, incorporating both descriptive and causal research designs to provide a comprehensive analysis. As a descriptive research design this aspect will involve summarizing and analyzing current trends and patterns in social media activity related to financial markets. It will capture data on the volume, frequency, and sentiment of social media posts, identifying general trends and correlations with market movements. On casual research design this part will focus on examining the cause-and-effect relationships between social media activities and financial market behaviors. The goal is to determine how specific social media events (e.g., viral posts, trending topics) impact stock prices, trading volumes, and other financial indicators. As a quantitative data collection, data will be collected from social media platforms (e.g., Twitter, Reddit), financial market indicators (e.g., stock prices, trading volumes), and sentiment analysis tools. Statistical software will be used to analyze the data and identify significant patterns and correlations. On qualitative data collections, Interviews with financial analysts, investors, and other stakeholders will be conducted to gain qualitative insights into the perceived impact of social media on investment decisions and market behaviors. As a data triangulation by combining quantitative and qualitative data from multiple sources, the research aims to provide a robust and holistic understanding of the influence of social media on financial markets.

3.2 Population and sample, and sampling design

The population refers to the whole group of people or entities being studied. For this study, the population includes investors, bankers, professors, students, and others related to the financial market. Out of this population, 389 samples are taken. The key groups in this study are individual investors using social media for investment decisions, institutional investors like financial institutions tracking social media for market trends, financial analysts who use social media trends to predict stock performance, and social media platforms like Twitter, Reddit, and Stock Twits. Listed companies whose stock prices may be affected by social media discussions are also part of the study.

3.3 Nature and sources of data, and the instrument of data collection

In this study, primary data sources are important because they provide first-hand information that can provide unique insights. The main data sources for this topic are usually: To study the effect of social media on financial markets, the main data sources are social media platforms such as Twitter, Facebook and Reddit, where real-time user-generated content can be collected. This information consists of posts, comments, tweets and conversations related to specific stocks or market trends. In addition, financial market information from exchanges, trading platforms and financial news websites is important. This information includes stock prices, trading volumes and financial news, which can be used to analyze market movement and sentiment. Surveys and interviews with marketers, investors and financial analysts are also valuable primary data sources that provide direct insight into how social media influences their business decisions and market insights. These combined data sources allow for an in-depth analysis of the interaction between social media and financial market behavior. Questionnaire is the main data collection procedure for this study. Questionnaire is structured in different sections.

This study follows several key steps to make sure the data is clean, analyzed, and correctly understood. First, it removes duplicate, spam, and irrelevant data to ensure accuracy. Then, it combines social media data with financial data using timestamps and stock symbols. The study uses sentiment analysis to classify messages and extract important information, like sentiment scores and trading volumes. Data is normalized for consistency, and statistical analysis is done to find trends and relationships. The study applies regression and machine learning models to predict market movements,

validates these models, and interprets the results with data visualization. Finally, all steps are documented for transparency and future use.

Cleaning data

The first step is to clean the collected data. For social media data, this means removing duplicates, irrelevant posts, spam and ads. study use techniques such as Natural Language Processing (NLP) to filter out non-English content and other unnecessary information, leaving only relevant social media activity. Similarly, financial market data is cleaned by comparing it with multiple sources and correcting errors or inconsistencies in stock prices, trading volumes and dates. This ensures that we have a clean and accurate data set that reflects social media conversations and market conditions.

Data integration

After cleaning, the next step is to combine social media data with financial market data. This includes matching data based on timestamps and associated stock symbols. By matching social media activity with market movements, study create a comprehensive dataset that describes the relationship between social media sentiment and financial market performance. This step is important to ensure data synchronization and comparability for analysis.

Data transformation

Data transformation involves converting raw data into a format suitable for analysis. Sentiment analysis algorithms are applied to social media posts to classify them as positive, negative or neutral, helping us gauge general sentiment about certain stocks or markets. Study extract important features from the data, such as the number of messages, opinion scores, trading volumes and stock price changes. These features are important for statistical and predictive analyses.

Data normalization

Normalization ensures data consistency across units and scales, which is critical for accurate comparisons and analyses. This step involves scaling the data so that different variables can be compared on the same scale. Normalization helps reduce bias that may result from differences in the range or extent of the data, ensuring reliable and interpretable results.

Statistical Analysis

Statistical analysis is performed to understand general trends and relationships in data. We calculate basic statistics such as mean, median and standard deviation for both

social media and financial market data to gain a basic understanding of data distribution and key trends. It perform correlation analysis to identify relationships between social media sentiment and financial market movements, which helps us quantify how social media activity affects market behavior.

Modeling and Testing

Regression analysis is used to measure the impact of social media on Nepalese financial markets. Additionally, study apply machine learning models such as decision trees and random forests to predict market movements based on social media. These patterns help us understand complex relationships and provide valuable predictive information to traders and investors.

Validation

Validation is critical to the accuracy and reliability of models. Back testing involves testing models against historical data to determine their performance. Study also use cross-validation techniques to ensure that the models are not over-fitted and that they can be generalized to new data. This helps us assess the reliability and predictive power of the models.

Interpretation and Visualization

Data visualization involves creating graphs, charts, and dashboards that visually represent the relationships and trends observed in the data. This makes it easier to interpret the results and draw meaningful conclusions about the effects of social media on financial markets. Visualization helps effectively communicate complex patterns and insights.

Documentation

Finally, documentation of data processing steps, methods and findings is essential for transparency and reproducibility. Detailed documentation ensures that other researchers can repeat the study and the results can be independently verified. This increases the reliability of the study and provides a thorough overview of the data processing procedures. By following these data processing methods, studies can effectively analyze the effect of social media on financial markets and provide valuable information to traders, investors and researchers.

3.4 Methods of analysis

Various data analysis tools and techniques can be utilized to examine the relationship between social media activities and financial market behaviors.

3.4.1 Statistical Tools

The several statistical tools can be employed to analyze the relationship between social media activities and financial market behaviors.

Frequency and Percentage

These statistical tools help to describe and interpret the characteristics of data, providing insights into the patterns and trends that might not be immediately apparent. Frequency refers to how often a particular event or data point appears in a dataset. In this study, frequency is used to analyze how often certain social media activities, like specific hashtags, mentions, or sentiment types, occur. This helps identify patterns and trends in social media behaviors, such as the increase in certain types of posts during periods of market volatility. Additionally, frequency is useful for showing how different categories, like sentiment types or bot activities, are spread out within the dataset. Percentage represents a part of a whole, shown as a fraction out of 100. In this study, percentages help compare different categories, such as the share of positive versus negative sentiments in social media posts during a market event. They also make it easier to compare data across different groups or time periods, even if the number of data points varies. Using percentages allows for clear communication of findings, such as showing that "70% of tweets about a stock were positive during a market rally," making the data more understandable for readers.

Arithmetic Mean

The arithmetic mean, often simply called the "mean" or "average," is a measure of central tendency that is calculated by adding up all the values in a dataset and then dividing by the number of values. It provides a single value that represents the center or typical value of a dataset. The arithmetic mean, or average, is a measure of central tendency calculated by adding up all the values in a dataset and dividing by the number of values. In the context of studying perceptions, the mean helps summarize the overall sentiment or opinion of a group. This makes it useful for comparing perceptions across different groups or tracking changes over time. However, it can be affected by extreme values, so it may not always fully represent the entire dataset.

$$\bar{X} = \frac{\sum x}{N}$$

Where,

$$\bar{X} = \text{Arithmetic Mean}$$

$\sum X$ = Sum of Elements

N = Number of Observation

Standard Deviation

Standard Deviation is a statistical measure that quantifies the amount of variation or dispersion in a set of data values. It indicates how spread out the values in a dataset are from the mean (average) of the data. A low standard deviation means most of the data is close to the average, while a high standard deviation means the data is spread out over a larger range. It can be calculated as follows.

$$(\sigma) = \sqrt{\frac{\sum(X-\bar{X})^2}{n-1}}$$

Where, σ = Standard deviation

X= The value in the data distribution

\bar{X} = Sum of the square of mean deviation

n = Total no. of observation

Karl's Pearson Correlation

Pearson Correlation is a statistical measure that indicates the strength and direction of a linear relationship between two continuous variables, ranging from -1 to 1. A value of 1 means a perfect positive relationship, -1 indicates a perfect negative relationship, and 0 means no linear relationship. It's useful for analyzing how closely two variables, like social media sentiment and stock prices, are related. However, Pearson correlation only measures linear relationships and can be affected by outliers, which may distort the results.

$$\text{Where, Correlation}(r) = \frac{N\sum XY - \sum X \cdot \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

Where,

r= correlation coefficient

x= independent

y= dependent

N= no of pairs

$\sum xy$ = sum of xy

$\sum x$ = sum of x

$\sum y$ = sum of y

$\sum_x 2$ = sum of squared x

$\sum_y 2$ = sum of squared y

Multiple Regression

Multiple regression is a statistical method that examines the relationship between one dependent variable and multiple independent variables. It helps in understanding how each factor, such as Tweet, sentiment, and news mentions, together influence an outcome like stock prices. The technique provides coefficients that show the impact of each independent variable, while accounting for the influence of other variables in the model.

$$FM = \beta_0 + \beta_1 TV + \beta_2 TS + \beta_3 RP + \beta_4 TY + \beta_5 N + \epsilon$$

Where,

FM = Financial markets

TV= Tweet

TS= Tweet Sentiment

RP=Reels and posts

TY=Trending youtube

N=News

ϵ = Error

β_0 = Intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 = coefficient of the independent variables

3.5 Research framework and definition of variables

3.5.1 Conceptual Framework

The conceptual framework of this research is presented in graphic form which reflects the variables selected in research. It is presented below:

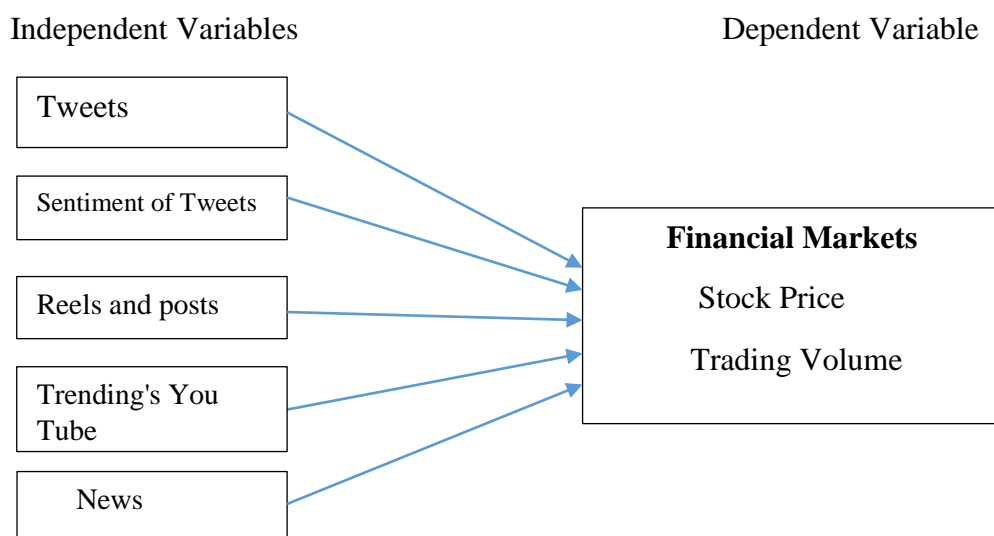


Figure 4 Conceptual Framework

Source: Talavera and Tran (2019; Coelho and Silva (2020); Tan and Tas (2020)); Chen and Dai(2023).

3.5.2 Definition of Variables

Independent Variables

In experimental research, an independent variable is a factor that you deliberately manipulate, control, or change to observe its effects on other variables. It is termed "independent" because its variation is not influenced by other factors in the study, allowing researchers to assess its direct impact on the dependent variables. They are as follows:

Tweet

This refers to the total number of tweets related to specific stocks, financial markets, or economic topics within a given time frame. It measures the level of discussion or attention a particular subject is receiving on Twitter (Cruz et al., 2021) and (Liu et al., 2018).

Sentiment of Tweets

This variable captures the overall tone or emotion expressed in tweets about stocks or financial markets. Sentiments are typically categorized as positive, negative, or neutral, indicating public opinion and mood (Chen et al., 2023).

Reels and Posts

This refers to the content shared on social media platforms like Facebook and TikTok, including short videos (reels) and posts related to financial markets. It measures the engagement and dissemination of financial information on these platforms (Liang & Wolfe, 2022).

Trending YouTube

This variable tracks the popularity and trending status of YouTube videos related to financial topics, stocks, or markets. It reflects the level of public interest and engagement with financial content on YouTube (Alias et al., 2013)

News

This refers to the frequency and nature of media coverage and mentions in various news outlets concerning specific stocks, markets, or financial events. It measures the media's role in shaping public perception and market behavior (Jiao et al., 2020).

Dependent Variables

Financial markets are platforms or systems where buyers and sellers engage in the trading of financial assets, such as stocks, bonds, currencies, and derivatives. These

markets facilitate the exchange of capital and allow businesses, governments, and individuals to invest, borrow, or hedge against risks. Financial markets play a crucial role in determining the prices of assets, allocating resources, and providing liquidity to the economy.

Financial Markets

Financial Markets as a Dependent Variable encompasses various measurable aspects of the market that can be affected by social media activities. Financial markets are platforms where financial assets such as shares, bonds, raw materials and currencies are traded and transactions between investors, companies and authorities are facilitated. These markets play an important role in determining asset prices through supply and demand, while providing the means for raising capital, transferring risk and regulating income. They are classified into stock markets (for corporate stock trading), bond markets (for debt securities), commodity markets (for raw materials), foreign exchange markets (for currencies) and derivative markets (for instruments such as components and options). Financial markets are important to the economy and provide individuals with access to capital for business and investment opportunities (Hu & Tripathi, 2016).

Chapter IV

Results and Discussion

In this chapter, collected data are analyzed and interpreted as per the stated methodology in the previous chapter. The several statistical tools Percentage and Frequency for demographic, Arithmetic Mean, Standard Deviation, Karl's Pearson Correlation, Multiple Regressions can be employed to analyze the relationship between social media activities and financial market behaviors.

4.1 Results

This study aims to uncover the intricate relationships between various social media metrics and financial market behaviors. The anticipated results are expected to provide valuable insights into how social media dynamics contribute to fluctuations in financial markets, revealing patterns and correlations that can inform both academic understanding and practical financial strategies. The several tools Percentage and Frequency, Arithmetic Mean, Standard Deviation, Karl's Pearson Correlation, Multiple Regressions helpful to measure the relationship between social media activities and financial market behaviors.

Table 2
Demographic Information

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	185	47.6	47.6	47.6
	Male	204	52.4	52.4	100.0
	Total	389	100.0	100.0	
MARITAL					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	172	44.2	44.2	44.2
	Others	1	.3	.3	44.5
	Unmarried	216	55.5	55.5	100.0
	Total	389	100.0	100.0	
EDUCATION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's Degree	150	38.6	38.6	38.6
	Master Degree	89	22.9	22.9	61.4
	PHD or Higher	2	.5	.5	62.0

SLC and Below	148	38.0	38.0	100.0
Total	389	100.0	100.0	

OCCUPATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Entrepreneurs	27	6.9	6.9	6.9
	Government Sector	63	16.2	16.2	23.1
	Others	40	10.3	10.3	33.4
	Private Sector	93	23.9	23.9	57.3
	Retired	4	1.0	1.0	58.4
	Student	162	41.6	41.6	100.0
	Total	389	100.0	100.0	

INCOME

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 Lakh to 15 Lakh	24	6.2	6.2	6.2
	15 Lakh to 20 Lakh	8	2.1	2.1	8.2
	5 Lakh to 10 Lakh	84	21.6	21.6	29.8
	Above 20 Lakh	6	1.5	1.5	31.4
	Less than 5 Lakh	267	68.6	68.6	100.0
	Total	389	100.0	100.0	

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	389	16.00	67.00	29.0103	8.94657
Valid N (listwise)	389				

Source: *Author's calculation*

Gender

The group is almost evenly split between males and females. Out of 389 people, 204 are male, making up 52.4% of the group, while 185 are female, accounting for 47.6%. This shows a slight majority of males in the group.

Marital Status

In terms of marital status, most people are unmarried, with 216 out of 389 (55.5%) in this category. There are 172 married individuals, making up 44.2% of the group. Only

1 person, or 0.3%, falls into other marital status categories such as divorced or widowed.

Education

When it comes to education, the largest group has a Bachelor's degree, with 150 people (38.6%). Following this, 89 people (22.9%) have a Master's degree. There are only 2 people (0.5%) with a PhD or higher degree. Additionally, 148 people (38.0%) have only completed their School Leaving Certificate (SLC) or have less education.

Occupation

The occupation distribution shows that a significant portion of the group are students, totaling 162 people (41.6%). In comparison, 93 people (23.9%) work in the private sector, 63 people (16.2%) are employed in the government sector, and 27 people (6.9%) are entrepreneurs. Fewer people are in other categories, such as 4 retirees (1.0%) and 40 in various other jobs (10.3%).

Income

Income levels vary widely within the group. The largest portion, 267 people (68.6%), earn less than 5 lakh. A smaller group, 84 people (21.6%), earn between 5 lakh and 10 lakh. The remaining income brackets have much fewer people, with only 24 people (6.2%) earning between 10 lakh and 15 lakh, 8 people (2.1%) earning between 15 lakh and 20 lakh, and 6 people (1.5%) earning above 20 lakh.

Age

The age of the people in this group ranges from 16 to 67 years. On average, the group is 29 years old. This wide range of ages includes both younger and older individuals, reflecting a diverse age distribution.

4.1.1 Descriptive Analysis of the Variables

Table 3

Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
TV1	389	1.00	5.00	3.5758	1.08767
TV2	389	1.00	5.00	3.5990	1.00442
TV3	389	1.00	5.00	3.6838	1.04796
TV4	389	1.00	5.00	3.5244	1.05642
TV5	389	1.00	5.00	3.6864	1.09325
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 3 shows statistics for five items (TV1 to TV5), each rated by 389 participants on a scale from 1 (strongly disagree) to 5 (strongly agree). The average (mean) scores for these items range from 3.5244 to 3.6864, indicating that most responses lean slightly toward agreement. The standard deviations, which measure the variation in responses, range from 1.00442 to 1.09325, suggesting a moderate level of difference in how participants responded to each item. Overall, the participants tend to agree with the statements, but their opinions vary somewhat.

Table 4

Descriptive of Sentiment of tweets volume

	N	Minimum	Maximum	Mean	Std. Deviation
SA1	389	1.00	5.00	3.586	1.09163
				1	
SA2	389	1.00	5.00	3.658	1.06433
				1	
SA3	389	1.00	5.00	3.439	1.11437
				6	
SA4	389	1.00	5.00	3.455	1.08938
				0	
SA5	389	1.00	5.00	3.527	1.04409
				0	
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 4 presents descriptive statistics for five items (SA1 to SA5), each rated by 389 participants on a scale of 1 (strongly disagree) to 5 (strongly agree). The average (mean) scores range from 3.4396 to 3.6581, suggesting that responses generally fall slightly above the neutral point, indicating a mild agreement. The standard deviations, ranging from 1.04409 to 1.11437, show a moderate spread in participants' responses, meaning there is some variability in opinions but overall consistency. This indicates that while participants tend to agree with the statements, their views vary to a moderate extent.

Table 5
Descriptive Analysis of Reels and Posts

	N	Minimum	Maximum	Mean	Std. Deviation
RP1	389	1.00	5.00	3.4884	1.12516
RP2	389	1.00	5.00	3.4524	1.12650
RP3	389	1.00	5.00	3.6607	1.08077
RP4	389	1.00	5.00	3.5630	1.04992
RP5	389	1.00	5.00	3.6118	1.07740
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 5 shows descriptive statistics for five items (RP1 to RP5), each rated by 389 participants on a 1 to 5 scale, where 1 represents "strongly disagree" and 5 represents "strongly agree." The mean values range from 3.4524 to 3.6607, indicating that most participants lean slightly toward agreement with these items. The standard deviations, which range from 1.04992 to 1.12650, suggest a moderate level of variability in responses, meaning that while participants generally agree with the items, their opinions show some variation. Overall, the responses reflect mild agreement with some differences in views.

Table 6
Descriptive Analysis of Trending youtube

	N	Minimum	Maximum	Mean	Std. Deviation
TY1	389	1.00	5.00	3.5656	1.08359
TY2	389	1.00	5.00	3.5681	1.03973
TY3	389	1.00	5.00	3.5321	1.04887
TY4	389	1.00	5.00	3.4627	1.01878
TY5	389	1.00	5.00	3.6195	1.04498
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 6 displays descriptive statistics for five items (TY1 to TY5), rated by 389 participants on a 1 to 5 Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree." The average (mean) scores range from 3.4627 to 3.6195, indicating that participants' responses generally lean toward agreement with the statements. The standard deviations, ranging from 1.01878 to 1.08359, show moderate variability in responses, meaning participants had somewhat differing opinions, though the responses are fairly consistent overall. This suggests a general tendency toward agreement with some variation in perspectives across these items.

Table 7
Descriptive analysis of News

	N	Minimum	Maximum	Mean	Std. Deviation
N1	389	1.00	5.00	3.6632	1.02405
N2	389	1.00	5.00	3.4473	1.04310
N3	389	1.00	5.00	3.4859	1.07834
N4	389	1.00	5.00	3.6735	1.06676
N5	389	1.00	5.00	3.7301	1.01364
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 7 presents descriptive statistics for five items (N1 to N5), each rated by 389 participants on a scale from 1 (strongly disagree) to 5 (strongly agree). The mean values range from 3.4473 to 3.7301, indicating that most participants tend to agree with these items, with a slight variation in responses. The standard deviations, which vary from 1.01364 to 1.07834, suggest a moderate level of variability in participants' responses, showing some differences in opinions but with general consistency. Overall, the results reflect a tendency toward agreement with the statements, with varying degrees of opinion.

Table 8
Descriptive summary

	N	Minimum	Maximum	Mean	Std. Deviation
TWEET	389	1.00	5.00	3.6139	.86198
SENTIMENT OF TWEETS	389	1.00	5.00	3.5332	.87335
REELSANDPOSTS	389	1.00	5.00	3.5553	.90722
TRENDINGSYOUTUBE	389	1.00	5.00	3.5496	.84800
NEWS	389	1.00	5.00	3.6000	.83740
Valid N (listwise)	389				

Source: *Author's calculation*

The Table 8 provides descriptive statistics for five variables related to social media activity: Tweet, Sentiment of tweets, Reels and Posts, Trending YouTube Content, and News, with data from 389 participants. The mean values for these variables range from 3.5332 to 3.6139, indicating that, on average, participants lean toward agreement

regarding these factors' influence. The standard deviations, ranging from 0.83740 to 0.90722, suggest low to moderate variability in responses, meaning participants' views are relatively consistent, though there is some variation. Overall, the respondents tend to agree that these social media factors have an impact, with Tweet having the highest mean (3.6139) and Sentiment of tweets the lowest (3.5332).

4.1.2 Karl's Pearson Correlation

Karl Pearson's correlation coefficient, also known as Pearson's r , is a statistical measure used to quantify the strength and direction of the linear relationship between two continuous variables. Its value ranges from -1 to +1, where +1 indicates a perfect positive linear relationship, -1 indicates a perfect negative linear relationship, and 0 means no linear relationship exists between the variables. Pearson's correlation helps us understand whether an increase in one variable corresponds to an increase or decrease in the other. For instance, a strong positive correlation (close to +1) means that as one variable increases, the other tends to increase proportionally, whereas a negative correlation (close to -1) suggests that as one variable increases, the other decreases. It is widely used in research to assess relationships between variables, such as in finance, where it could be used to determine how social media activity (like Tweet) relates to stock market performance. Pearson's correlation assumes that the relationship between variables is linear, the data is normally distributed, and there is homoscedasticity, meaning the variance in one variable is similar across the values of the other variable.

Table 9

Correlations Matrix

		TWEET	SENTI	REELS	TREND	NE	FINAN
		VOLU	MENT	ANDP	INGSY	WS	CIALM
		ME	VOLU	OSTS	OUTU		ARKET
			ME		BE		S
TWEET	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	389					
SENTIMENT OF TWEETS	Pearson Correlation	.721**	1				
	Sig. (2-	<.001					

	tailed)						
	N	389	389				
REELSAND POSTS	Pearson Correlation	.717**	.698**	1			
	Sig. (2- tailed)	<.001	<.001				
	N	389	389	389			
TRENDINGS YOUTUBE	Pearson Correlation	.704**	.731**	.766**	1		
	Sig. (2- tailed)	<.001	<.001	<.001			
	N	389	389	389	389		
NEWS	Pearson Correlation	.705**	.761**	.701**	.787**	1	
	Sig. (2- tailed)	<.001	<.001	<.001	<.001		
	N	389	389	389	389	389	
FINANCIAL MARKETS	Pearson Correlation	.720**	.733**	.761**	.805**	.791**	1
	Sig. (2- tailed)	<.001	<.001	<.001	<.001	<.001	1
	N	389	389	389	389	389	389

** . Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's calculation*

The correlation matrix provides a comprehensive view of how various social media metrics relate to financial markets. The analysis shows that Tweet, sentiment of tweets, reels and posts, trending YouTube content, and news all exhibit strong positive correlations with each other. For instance, an increase in Tweet is associated with a rise in sentiment of tweets, more reels and posts, and increased trending content on YouTube. These relationships suggest that social media activity is interrelated and can create a ripple effect across different platforms.

When it comes to the financial markets, the correlations are particularly noteworthy. All the social media metrics analyzed show a significant positive correlation with financial market changes. Tweet, for example, has a correlation of 0.720 with financial markets, indicating a strong link between the amount of tweeting activity and market movements. Similarly, sentiment of tweets, reels and posts, and trending YouTube content all demonstrate high correlations with financial markets, with trending YouTube showing the strongest correlation at 0.805. This suggests that

fluctuations in these social media metrics often align with changes in financial markets.

The strong positive correlations between social media metrics and financial markets highlight the significant impact that social media activity can have on market conditions. The close relationships between factors such as sentiment of tweets and news coverage, and their impact on financial markets, point to the role of social media as a potential indicator of market trends. For instance, the correlation between news and financial markets at 0.791 indicates that changes in news coverage are closely tied to market fluctuations.

Overall, these findings underscore the interconnected nature of social media and financial markets. As social media activity increases or shifts, it often corresponds with changes in financial markets. This relationship emphasizes the importance of monitoring social media trends as part of financial market analysis and suggests that social media metrics can provide valuable insights into market behavior.

4.1.3 Regression Analysis

Regression analysis is a statistical tool used to understand the relationship between one dependent variable and one or more independent variables. It shows how changes in independent variables affect the dependent variable. In this study, regression analysis is used to measure how social media factors like Tweet, sentiment of tweets, reels and posts, news mentions, and trending YouTube content impact financial market behaviors, such as stock volatility and trading volume. The main goal is to identify which social media metrics significantly influence market movements and how strong these effects are, helping to reveal patterns and correlations in the data.

Table 10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867 ^a	.751	.748	.44426

a. Predictors: (Constant), News, Reels and Posts, Tweet, Sentiment of tweets, Trending youtube

Source: *Author's calculation*

The Model Summary Table 10 provides an overview of how well the model performs in predicting or explaining the data. The R value of 0.867 indicates a strong correlation between the model's predictions and the actual outcomes, suggesting that the model fits the data well. The R Square value of 0.751 shows that approximately

75.1% of the variability in the dependent variable is accounted for by the model, meaning it explains a significant portion of the variance. The Adjusted R Square, at 0.748, slightly adjusts the R Square value to account for the number of predictors used, still indicating that the model performs robustly even after this adjustment. Lastly, the Standard Error of the Estimate is 0.44426, reflecting the average distance between the predicted values and the actual values, with a lower number indicating more accurate predictions. Overall, the model is effective at using the predictors news, reels and Tweet, sentiment of Tweet and trending youtube to provide reliable predictions.

Table 11
Anova

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	227.979	5	45.596	231.025	<.001 ^b
	Residual	75.590	38	.197		
	Total	303.569	38			

a. Dependent Variable: Financial Markets

b. Predictors: (Constant), News, Reels and Posts, Tweet, Sentiment of tweets, Trending youtube

Source: *Author's calculation*

The ANOVA Table 11 provides insights into how well the model explains the variability in the dependent variable, which in this case is "Financial markets." The Sum of Squares for the Regression row is 227.979, showing the amount of variability in Financial markets that is explained by the model's predictors (News, Reels and posts, Tweet, Sentiment of tweets, and Trending's youtube). The Residual row, with a Sum of Squares of 75.590, indicates the amount of variability that the model does not account for. The Total row, showing 303.569, represents the overall variability in Financial markets.

In terms of Degrees of Freedom (df), the model has 5 degrees of freedom for the Regression, corresponding to the number of predictors used. The Residuals have 383 degrees of freedom, calculated from the total number of data points minus the predictors minus one. The Mean Square for Regression is 45.596, reflecting the average variability explained by each predictor, while the Residual Mean Square is 0.197, indicating the average unexplained variability.

The F Statistic is 231.025, a measure used to determine if the model explains a significant portion of the variability. A high F value suggests that the model is effective. The Significance Level (Sig.) is less than 0.001, which means the model is highly statistically significant. This low p-value indicates that the predictors in the model provide a meaningful explanation of the variability in Financial markets, confirming that the model is robust and effective.

Table 12
Effect Analysis

Model	Unstandardized		Standardized	t	Sig.	Collinearity	
	Coefficients		Coefficients			Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.016	.108		.150	.881		
TWEET	.117	.043	.114	2.700	.007	.366	2.730
SENTIMEN OF TWEETS	.091	.045	.090	2.030	.043	.329	3.042
REELSANDPOSTS	.200	.043	.205	4.676	<.001	.338	2.959
TRENDINGSYOUTUBE	.303	.051	.290	5.981	<.001	.276	3.619
NEWS	.285	.050	.270	5.729	<.001	.293	3.409

a. Dependent Variable: Financial Markets

Source: *Author's calculation*

The Table 12 presents the results of a multiple linear regression analysis aimed at understanding the relationship between several independent variables and the dependent variable, which in this case is labeled as "Financial Markets." The regression model assesses how different factors namely Tweet, Sentiment of tweets, Reels and Posts, Trending YouTube Content, and News affect financial markets.

Coefficients and Significance: Each row in the table represents one of the independent variables in the model. The "Unstandardized Coefficients" column shows the estimated impact of each independent variable on the dependent variable in its original unit of measurement. For instance, the coefficient for Tweet is 0.117, which means that for each unit increase in Tweet, the financial markets are expected to increase by 0.117 units, assuming all other variables are held constant. Similarly, the coefficient for News is 0.285, indicating a relatively strong positive relationship with financial markets. The "Standardized Coefficients" or Beta values provide a measure of the strength of each predictor relative to the others, with Reels and Posts (Beta = 0.205) and Trending YouTube Content (Beta = 0.290) having higher values compared to Tweet (Beta = 0.114) and Sentiment of tweets (Beta = 0.090).

Statistical Significance: The "Sig." column provides the p-values associated with each predictor's coefficient. A p-value less than 0.05 indicates that the predictor is statistically significant at the 5% level. In this table, all variables except for the constant term are statistically significant. Specifically, Trending YouTube Content ($p < 0.001$), News ($p < 0.001$), and Reels and Posts ($p < 0.001$) all have very small p-values, suggesting strong evidence that these factors significantly impact financial markets. Tweet ($p = 0.007$) and Sentiment of tweets ($p = 0.043$) also have significant p-values, although they are higher compared to the others.

Collinearity Statistics: The "Tolerance" and "VIF" (Variance Inflation Factor) values are used to assess multi collinearity among the independent variables. Tolerance values measure how much of the variance of an independent variable is not explained by the other independent variables, and VIF values indicate how much the variance of an estimated regression coefficient increases due to multi collinearity. In this table, all tolerance values are above the commonly used cutoff of 0.10, and all VIF values are below the threshold of 10. This suggests that multi collinearity is not a significant issue in this model, and the independent variables are not highly correlated with each other, which enhances the reliability of the regression results.

Table 13
Summary of the hypostudy testing

s.n	Attributes	Sig.	Remarks
1	There are significant effect of Tweet on financial markets.	0.007	Accepted
2	There are significant effect of sentiment on financial markets.	0.043	Accepted
3	There are significant effect of reels and posts on financial markets.	0.001	Accepted
4	There are significant effect of trending youtube on financial markets.	0.001	Accepted
5	There are significant effect of news on financial markets.	0.001	Accepted

Source: *Author's calculation*

4.2 Discussion

The results reveal that social media and news activities significantly influence financial markets. Tweet, sentiment, and visual content from reels and posts are important, but trending YouTube content and news have the most considerable impact. It is similar to (Chen et al., 2023). Who found the strong correlation with

YouTube content and news suggests that multimedia and information dissemination play critical roles in market performance. Despite some multicollinearity among variables, each provides unique insights into how social media affects market behavior, emphasizing the need to consider these factors in financial analysis.

The analysis highlights that various social media and news activities significantly influence financial markets. Higher Tweet and positive sentiment, along with engagement with reels, posts, trending YouTube content, and news, are all closely linked to market performance. The strongest correlation is seen with trending YouTube content, underscoring the growing impact of video content on financial markets. These findings emphasize the importance of social media and news as critical drivers of market behavior and investor sentiment. It is consistent to (Fan et al., 2019). Who observed also confirmed by an event study of stock response following abnormal increases in the volume of tweets

The conclusions drawn by Valle-Cruz et al. (2022) and Hussain (2024), who noted that social media not only provides a platform for information dissemination but also serves as a battleground for market sentiment. However, the study expands on this by including multiple platforms beyond Twitter, offering a more comprehensive view. Where the Hu and Tripathi.(2016) is not similar. Who found that raw returns are not significantly related to sentiment from news media.

This study examines the effect of various social media activities such as Tweet, sentiment, reels and posts, trending YouTube content, and news on financial markets. The findings reveal that Tweet significantly influences market fluctuations, with higher activity correlating with greater market variability. Sentiment of tweets also affects financial markets positively, though its impact is less pronounced compared to other factors. Reels and posts demonstrate a strong positive relationship with market performance, highlighting the role of visual content in shaping market trends. Which is similar with the result of (Liu et al., 2018), a media effect exists in new media channels: trading volume and turnover ratio are positively related to activities in new media. This supports the findings of previous research, such as Khan et al. (2020), which highlights the role of media in market movements. However, the study adds depth by showing that the amplification effect is particularly strong when news is shared and discussed on social media.

In Nepalese financial markets, YouTube videos and news coverage have a strong influence on investor decisions. Financial content on YouTube, offering stock tips and

market analysis, is especially impactful, attracting many young investors. News, both online and traditional, also plays a key role in shaping market movements. Positive news often boosts stock prices, while negative news can lead to sell-offs. Given the smaller size of the Nepalese market, these factors can create noticeable shifts in stock prices and trading activity, making video content and news major drivers of market behavior.

Chapter V

Summary and Conclusion

This chapter is divided into three parts. The Summary section briefly reviews the main findings of the study. The Conclusion section draws final insights from these findings. Lastly, the Implications section explores the practical and theoretical consequences of the results and suggests directions for future research or application.

5.1 Summary

This study is prepared to find out the effect of social media on financial markets. The key factors of the study are tweets, sentiment of Tweet, reels and posts, trending youtube and news with financial markets to achieve the goal. The first chapter includes the research background, problem statement, significance and limitations of the study. The second chapter includes a review of relevant literature, theoretical background of social medias principles as well as previous journals, articles and these. Chapter three presents the methods and techniques applied to evaluate the relationship and effects between Social media and financial markets with clear conceptual framework. In the fourth chapter, data and information collected from different sources are analyzed and presented where the analysis and evaluation are done using different financial and statistical tools. Frequency and percentage, arithmetic mean, standard deviation, Karl's Pearson correlation are used as statistical tools for find the result and the data analysis, and present the accurate results.

In the study, the group of 389 people is almost evenly split between males and females, with slightly more males (52.4%) compared to females (47.6%). Most people in the group are unmarried (55.5%), while 44.2% are married, and only 0.3% are in other marital statuses. Regarding education, the largest number have a Bachelor's degree (38.6%), followed by those with a Master's degree (22.9%), and a few have a PhD or higher (0.5%). Many people are students (41.6%), while others work in the private sector (23.9%), government (16.2%), or are entrepreneurs (6.9%). Income varies, with most people earning less than 5 lakh (68.6%), and fewer people in higher income brackets. The ages of the group range from 16 to 67, with an average age of 29, showing a broad mix of younger and older individuals.

These descriptive statistics, five social media-related variables Tweet, Sentiment of tweets, Reels and posts, Trending youTube Content, and News based on data from 389 participants. The average ratings for these factors are close, ranging from 3.5332

to 3.6139, showing that participants generally agree on their impact. The standard deviations, which range from 0.83740 to 0.90722, indicate that while there is some variation in opinions, responses are fairly consistent. Among the variables, Tweet has the highest average rating (3.6139), while Sentiment of tweets has the lowest (3.5332). Overall, the data suggests a general agreement that these social media factors influence participants.

The correlation matrix shows how different social media metrics, such as Tweet, sentiment of tweets, reels and posts, trending YouTube content, and news, are strongly related to each other. For example, an increase in Tweet is linked to higher sentiment of tweets, more reels and posts, and more trending YouTube content, indicating that activity across these social media platforms tends to rise together. When it comes to financial markets, these social media metrics also show strong positive correlations. Tweet has a correlation of 0.720 with financial markets, while trending YouTube content has the highest correlation at 0.805. This means that changes in social media activity are closely aligned with market movements. The strong connections between social media metrics and financial markets suggest that monitoring social media can be a useful tool for predicting market trends, as shifts in social media activity often reflect changes in financial conditions.

The effect shows from the on a regression analysis that examines how various social media factors Tweet, Sentiment of tweets, Reels and posts, Trending youTube Content, and News affect financial markets. Each factor's impact is measured by its coefficient: for example, a one-unit increase in Tweet leads to a 0.117-unit increase in financial markets, while News has a stronger effect with a coefficient of 0.285. The standardized coefficients show the relative strength of each factor, with Trending YouTube Content (Beta = 0.290) and Reels and Posts (Beta = 0.205) having the greatest influence. All factors except for the constant term are statistically significant, with Trending YouTube Content, News, and Reels and Posts showing very strong significance ($p < 0.001$). This means these factors significantly impact financial markets. The table also shows that there is no major issue with multi collinearity among the variables, as indicated by acceptable tolerance and VIF values, which means the results are reliable.

5.2 Conclusion

This study explores the impact of social media on financial markets by examining five key factors: Tweet, Sentiment of tweets, Reels and Posts, Trending YouTube Content, and News. The research is divided into several chapters, starting with an introduction that outlines the background, significance, and limitations of the study. It proceeds with a literature review and theoretical framework, followed by a detailed description of the methods used to analyze the relationship between social media activity and financial markets.

The analysis of data from 389 participants reveals that social media factors are strongly interrelated and significantly affect financial markets. Participants generally agree on the influence of these factors, with Tweet having the highest average rating and Sentiment of tweets the lowest. Correlation and regression analyses confirm that social media metrics like Tweet and Trending YouTube Content are closely aligned with financial market movements, suggesting that shifts in social media activity can predict market trends.

The regression results show that each social media factor has a meaningful impact on financial markets. For instance, a one-unit increase in Tweet correlates with a 0.117-unit increase in financial markets, while News has a stronger effect with a coefficient of 0.285. Trending YouTube Content and Reels and Posts are particularly influential, with high standardized coefficients and strong statistical significance. The absence of significant multi collinearity among the variables further ensures the reliability of these findings. Overall, this study highlights the importance of monitoring social media activity as a tool for understanding and predicting financial market changes.

5.3 Implications

This chapter has following implications:

- i. Social media activity impacts financial markets. Investors should use social media metrics like Tweet and Trending YouTube Content to anticipate market trends and make better investment decisions.
- ii. Social media data can improve market prediction models. Financial institutions should incorporate these metrics to enhance forecasting accuracy and investment advice.

- iii. There's a need for advanced tools to monitor social media trends in real-time. Organizations and investors should invest in technology to stay informed about market shifts.
- iv. Regulators should recognize social media's impact on financial markets. This understanding can help in creating policies to prevent market manipulation or misinformation.
- v. Companies and financial institutions can use social media insights to improve their communication strategies, aligning messages with market expectations and reducing risks.
- vi. More research is needed to understand how different types of social media content affect financial markets. Future studies should explore the specifics of this relationship and its impact on investor behavior.
- vii. Integrating social media analysis into financial market evaluations is crucial for better predicting and responding to market changes.

References

- Ahmadi, S. (2024). A comprehensive study on integration of big data and AI in financial industry and its effect on present and future opportunities. . *International Journal of Current Science Research and Review*, , 7(01), 66-74.
- Alias, N., Abd Razak, S., eHhadad, G., Mat Noh, N., & Muniandy , P. (2013). A content analysis in the studies of YouTube in selected journals. *Procedia - Social and Behavioral Sciences* 103 , 10-18.
- Atoom, D. S., A1afia, D. K., & A1 Fedawi, D. M. (2021). The effect of social media on making investment decisions for investors in amman financial market. *International Journal of Innovation, Creativity and Change.*,15(6), 934-960.
- Bernson, S. P. (2010). The sttitude towards social: A study of factors influencing Swedish company' attidues towards using social mediafor investor relations.
- Carosia, A. E., Coelho, G., & Silva, A. (2020). Analyzing the brazilian financial market through Portuguese sentiment analysis in social media. *Applied Artificial Intelligence*, 34(1), 1-19
- Chen, R., Dong, R., & Dai, Y. (2023). The relationship between twitter sentiment and stock performance: A decision tree approach. *Proceedings of the 56th Hawaii International Conference on System Sciences | 2023*, 4850-4859
- Collis, J., & Hussey, R. (2020). *Business research: a practical guide for undergraduate and postgraduate students*.
- Cwynar, A., Cwynna, W., Pater, R., & Filipek, K. (2019). Social media as an information source in finance: Evidence from the community of financial market professionals in Poland. *International Journal of Digital Accounting Research*, 29-58.
- Edwin, A. ..., Okpara, A., O. Mike, A., & Francis, I. O. (2014). The impact of information communication technologies in the strategic management of financial institutions. *International Review of Management and Business Research*, 3(3), 1588-1602.
- Fan, R., Talavera, O., & Tran, V. (2019). Social media bots and stock markets. *Eur Financial Management*, 26(3), 753-777.

- Hu, T., & Tripathi, A. (2016). Impact of social media and news media on financial markets. *In Thirty Seventh International Conference on Information Systems, Dublin.*, 1-10.
- Hussain, A. (2024). Influence of Digital Bank Services on the Financial Performance of the commercial Banks. *Review of Applied Management and Social Sciences (RAMSS)*, , 7(1), 43-51.
- Jiao, P., Veiga, A., & Walther, A. (2020). Social media, news media and the stock market. *Journal of Economic Behavior and Organization*, 176, 63-90.
- Khan, W., Ghazanfar, A. M., Azam, M. A., Karami, A., Alyoub, K. H., & Alfakeeh, A. S. (2022). Stock market prediction using machine learning classifiers and social media, news. *Journal of Ambient Intelligence and Humanized Computing*, 1-24.
- LEE, L. F., Hutton, A. P., & Shu, S. (19 January 2015). The Role of Social Media in the Capital Market: Evidence from Consumer Product Recalls. *Journal of Accounting Research* , 15(2), 367-404.
- Liang, S., & Wolfe, J. (2022). Getting a Feel of Instagram Reels:The Effects of Posting Format on Online Engagement. *Journal of students research*, 11(4).
- Liu, P., Xia, X., & Li, A. (23 July 2018). Tweeting the financial market: Media effect in the era of Big Data. *Pacific-Basin Finance Journal*, 51, 267-290.
- Paudel, R. B., Joshi, P. R., Rana, S. B., Baral, K. J., & Gautam, R. R. (Reprint 2023). Foundations of Financial System in Nepal. In R. B. Paudel, P. R. Joshi, S. B. Rana, K. J. Baral, & R. R. Gautam, *Foundations of Financial System in Nepal* (1-408). Bhotahity, Kathmandu, Nepal: Asmita Books Publisher and Distributors(P) Ltd. .
- Siikanen, M. e. (2018). Facebook Drives Behavior of Passive Households in Stock Markets. *Finance Research Letter*, 27,208-213.
- Smith, J. (2022 july). Social media marketing work book. In J. Smith. Jordan Smith.
- Tan, S. D., & Tas, O. (2020). Social media sentiment in international stock returns and trading activity. *Journal of Behavioral Finance*, 22(2), 221-234.

Valle-Cruz, D., Cortez, V. F., -Chau, A. L., & -Almazán, . S. (2021). Does twitter affect stock market decisions? Financial sentiment analysis during pandemics: A comparative study of the H1N1 and the COVID-19 periods. *Cognitive Computation*,14(1),372–387.

Appendix

EFFECT OF SOCIAL MEDIA ON NEPALESE FINANCIAL MARKETS

Respected

Sir / madam

Greetings for the day!

I am Bishnu Khadka , a student at Shanker Dev Campus currently pursuing a Master of Business Studies (MBS) for academic purpose. I am conducting research entitled " Effect of Social Media on Nepalese Financial Market". As a part of the research. I am conducting a survey to understand the Effect of Social Media on Financial Market.

I kindly request you to answer all statements. All the information will be confidential and will be used for a academic purpose only. Your opinion would be very valuable for the research. Please respond to each question honestly based on your individual experiences. The success of this survey relies on your cooperation. Thank you for your participation in this survey.

Sincerely,

Bishnu Khadka

General Information Tick (√) the correct information.

1. Name (optional):.....

2. Age:.....Years

3. Gender • Male • Female • Others

4. Marital Status • Married • Unmarried • Others

5. Education level

- SLC and Below
- Bachelor's Degree
- Master Degree
- PHD or Higher

6. Occupation

- Government Sector
- Private Sector
- Retired
- Student
- Entrepreneurs

- Others

7. Annual income in Rupees

- Less than 5 Lakh
- 5 Lakh to 10 Lakh
- 10 Lakh to 15 Lakh
- 15 Lakh to 20 Lakh
- Above 20 Lakh

Here are some Likert scale questions for the study topic "Effect of Social Media on Nepalese Financial Markets." Respondents will rate their agreement or perception on a scale from 1 (Strongly Disagree) , 2 (Disagree), 3 (Neutral), 4 (Agree) and 5 (Strongly Agree).

Tick (√) the correct option.

Tweets volume:	1	2	3	4	5
1. I believe that an increase in Tweet related to a company impacts its stock price.					
2. The number of tweets mentioning a company influences my investment decisions.					
3. High Tweet creates market volatility.					
4. I monitor Tweet to predict stock market trends.					
5. Tweet has a noticeable impact on stock prices in the financial market.					

Sentiment of Tweets:	1	2	3	4	5
1. Positive sentiment in tweets about a company leads to an increase in its stock price.					
2. Negative tweets significantly affect the stock performance of a company.					
3. I rely on sentiment analysis of tweets before making investment decisions.					
4. Sentiment is a reliable indicator of market trends.					
5. The overall sentiment of tweets accurately reflects market movements.					

Reels and Posts	1	2	3	4	5
1. Reels and posts on social media platforms can drive changes in stock prices.					
2. I consider the content of reels and posts before making investment decisions.					
3. Viral reels or posts influence the market performance of companies.					
4. The frequency of reels and posts related to a company affects its stock volatility.					

5. Reels and posts on social media platforms often lead to immediate market reactions.					
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Trending's YouTube Content:	1	2	3	4	5
1. Trending YouTube videos about a company impact its stock price.					
2. I believe that YouTube content can be a predictor of market trends.					
3. Investment decisions are influenced by the popularity of YouTube content.					
4. I monitor trending YouTube videos related to companies before trading.					
5. Financial trends on you tube serve as a guide for market participants.					

News :	1	2	3	4	5
1. Firmly believe media (newspaper, TV, magazines etc.) enriches my trading knowledge.					
2. I purchase stocks which are on the news and mentions.					
3. I never make any investment decisions without information from news and mentions.					
4. News about a company significantly impact its stock prices.					
5. Social media news alert influence investors decisions in financial markets.					

Financial Markets:	1	2	3	4	5
1.Social media platforms drive overall market trends.					
2 I believe that social media activity leads to increased trading volumes.					
3. Social media activity contributes to fluctuations in stock prices.					
4 The direction of market trends is influenced by the sentiment on social media.					
5. Investors' confidence in the financial market is affected by social media content.					

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By: BISHNU KHADKA

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Abstract This study investigates the Effect of Social Media on Nepalese Financial Markets by analyzing key factors such as tweet volume, sentiment of tweets, reels and posts, trending YouTube content, and news mentions. With a dataset comprising responses from 389 participants, the research explores how these social media elements correlate with market movements. The study adopts a quantitative approach, utilizing tools such as frequency analysis, arithmetic mean, standard