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HOW RUMORS ARE ASSOCIATED WITH

RETAIL INVESTORS' INVESTMENT DECISION MAKING

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Universiti Utara Malaysia

DOCTOR OF BUSINESS ADMINISTRATION

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RETAIL INVESTORS' INVESTMENT DECISION MAKING

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ABSTRACT

Retail investors' decision-making process can become complex, causing them to rely on rumors to make investment decisions. However, research on rumors and retail investment decision-making in Malaysia is still lacking. This study aims to explore rumors from a social reality perspective, the source that facilitates rumors, and the association between rumors and retail investors' investment decision-making. Bursa Malaysia was selected as the target exchange for this study to understand how the process of retail investors' decision-making when it is associated with rumors. In the data collection process, this study embarked on a qualitative inquiry approach using Gioia methodology. A semi-structured interviews with 29 respondents was conducted using purposive sampling for the fieldwork. Data-structure analysis reveals four aggregate dimensions of how rumors are associated with retail investors' investment decision-making, namely anticipated outcome, subjective probability, external factors, and fundamental principles. This study shows that rumor matters at the level of sociological influence, the mechanism of rumor spread, and the psychological perspective. These dimensions are associated with rumors and the investment decisions of retail investors. This study contributes to a better understanding of behavioral finance in retail investors' decision-making and its implications for the National Sustainable Development Goals (SDGs) program from a societal impact perspective. This study could also be a starting point for Bursa Malaysia and the Securities Commission Malaysia to investigate the actual existence of rumors, effective strategies to manage them, and their impact on the stock market and retail investors' investment decision making.

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Keywords: retail investors, decision-making, rumor, qualitative, gioia methodology

ABSTRAK

Proses membuat keputusan pelabur runcit boleh menjadi kompleks, menyebabkan mereka bergantung kepada khabar angin untuk dibuat keputusan pelaburan. Walau bagaimanapun, penyelidikan mengenai khabar angin dan pelaburan runcit membuat keputusan di Malaysia masih kurang. Kajian ini bertujuan untuk meneroka khabar angin dari perspektif realiti sosial, sumber yang memudahkan khabar angin, dan kaitan antara khabar angin dan membuat keputusan pelaburan pelabur runcit. Bursa Malaysia dipilih sebagai bursa sasaran untuk kajian ini bagi memahami bagaimana proses membuat keputusan pelabur runcit apabila ia dikaitkan dengan khabar angin. Dalam proses pengumpulan data, kajian ini memulakan pendekatan penyelidikan kualitatif dengan menggunakan kaedah metodologi Gioia. Temu bual separa berstruktur dengan 29 responden telah dijalankan menggunakan persampelan bertujuan untuk kerja lapangan. Analisis struktur data mendedahkan empat dimensi agregat tentang bagaimana khabar angin dikaitkan dengan pembuatan keputusan pelaburan pelabur runcit, iaitu hasil yang dijangkakan, kebarangkalian subjektif, faktor luaran dan prinsip asas. Kajian ini menunjukkan bahawa khabar angin itu penting pada tahap pengaruh sosiologi, mekanisme penyebaran khabar angin, dan perspektif psikologi. Dimensi ini dikaitkan dengan khabar angin dan keputusan pelaburan pelabur runcit. Kajian ini menyumbang kepada pemahaman yang lebih baik tentang kewangan tingkah laku dalam membuat keputusan pelabur runcit dan implikasi terhadap program Matlamat Pembangunan Lestari Nasional (SDGs) dari perspektif impak masyarakat. Kajian ini juga boleh menjadi titik permulaan kepada Bursa Malaysia dan Suruhanjaya Sekuriti Malaysia untuk menyiasat kewujudan sebenar khabar angin, strategi yang berkesan untuk mengurusnya, dan kesannya terhadap pasaran saham dan membuat keputusan pelaburan pelabur runcit.

Kata kunci: pelabur runcit, membuat keputusan, khabar angin, kualitatif, metodologi gioia

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LIST OF ABBREVIATIONS

EMH	Efficiency Market Hypothesis
AR	Abnormal Return
AAR	Average Abnormal Return
CAR	Cumulative Abnormal Return
ADV	Average Daily Volume
CDS	Central Depository Account
SC	Securities Commission
BURSA	Bursa Malaysia Berhad
UMA	Unusual Market Activity
ETP	Economy Transformation Program
CMP2	Capital Market Masterplan 2
GDP	Gross Domestic Product
AMH	Adaptive Market Hypothesis
IPO	Initial Public Offer
DOSM	Department of Statistics Malaysia
SCHEDULE 1	
(RULES 3.48)	Bursa Malaysia Dealer's Representative's Scope of Activities
(RULES 7.04)	Bursa Malaysia Dealings in Securities (Proprietary Trading)
SDG	Sustainable Development Goals
MDG	Millennium Development Goals
UN	United Nations
CWC	Cluster Working Committees
MCO	Movement Control Order

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Chapter 1 Introduction

1.1 Background of the Study

Making uncertain investment decisions can be challenging, particularly in the share market. Evidently, this is because it depicts the choice of shares among many alternative shares depending on the data obtained and examined (Nofsinger & Varma, 2014). Traditional and behavioral finance theories are two investment methods that investors might utilize when evaluating and interpreting information (Shiller, 2001). Traditional and behavioral finance differ in that the former assumes that retail investors are rational and that the share market is efficient (Shiller, 2001). On the other hand, it assumes that such psychological biases affect retail investors (Nofsinger & Varma, 2014). Jaiyeoba and Haron (2016) stated that investors would appreciate traditional financial instruments while making investment decisions if they knew the behavioral finance discussed above.

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The occurrence of unexpected share market fluctuations has further demonstrated that irrationality displayed by retail investors while making investment decisions has superseded standard financial practices. The NASDAQ Composite Index, for instance, saw a unique surge, soared by 170% during the speculative bubble in 1998, and ended up losing half of its market value three years later (Jamal et al., 2014). Similar trends were observed in the Stockholm index (SAX), which recorded a 118% spike in value during a similar time frame and a 43% decline in value in October 2001. The Asian Stock Market experienced a major collapse during the 1997–1998 financial crisis, which began in Thailand and quickly spread to other East Asian nations. Kuala Lumpur experienced the greatest percentage value decline, falling 76%, preceded by Jakarta and the Philippines (-65%), Thailand and South Korea (–64%), Hong Kong (–56%), as well as Singapore (–58%), all of which were strongly associated with rumors. Since

then, many researchers have started looking into how rumors affect retail investors' behavior (Jaiyeoba & Haron, 2016; Wu et al., 2022; Shi et al., 2023).

The theory of Efficient Market Hypothesis (**EMH**) was established by Eugene Fama (1970), while Khan (2004) mentioned that the market operates efficiently and share prices that move instantly reflect all the available information. Share prices are always believed to be traded at their true value on an exchange, and it is almost impossible for investors to buy or sell at excellent prices (Kuepper, 2019). However, inefficiencies do exist due to investor behavior and expectations (Xu, 2015). Although the market efficiency hypothesis is considered an important quality in financial theory nowadays, there are always some loopholes and gaps. Tumarkin and Whitelaw (2001) spark interest in the relationship between rumor and share prices, resulting in abnormal returns (**AR**s). Since then, extensive research has been conducted to determine whether rumors can benefit or harm investors. The event study empirically tests whether the average abnormal return (**AAR**) and cumulative abnormal return (**CAR**) around the publication date of the rumor, are related to studies investigating the effect of rumor. According to Cook (2015), most investors decide to invest in the stock market based on the legendary words, "Buy on the rumor, sell on the news." The phenomenon of these words happens in most share markets. Investors may apply the concept as a trading strategy and make their predictions about future movements. It may sound ridiculous, but in real life, it does happen. Cook (2015) further explained that this is where rumors slip into investors' sight in the share market.

In Malaysia, in 2019, there was a mega-merger announcement involving Axiata and Digi. Rumors about the merger spreading in the market happened a few days before the official announcement. On Friday, 3rd May 2019, the share prices of both companies started making a slight move compared to the day before. This scenario usually happens when retail investors

decide without seeking any clarification on the credibility of the rumors themselves (DiFonzo & Bordia, 2007). If the so-called 'tips' go the other way, they will suffer huge capital losses. In the Axiata and Digi cases, it did become real news. On 7th May 2019, Axiata Group, through its Chairman, Tan Sri Jamaluddin Ibrahim, announced that they are in talks with Norway's Telenor Group (Digi's major shareholder) to merge their operations in Asia. With pro forma revenue of RM50 billion and a net profit of RM4 billion, the merged entity will be the biggest operator in ASEAN. The share prices of both companies spiked up on the announcement day by 12% and 6%, respectively (please refer to **Appendix 1**).

1.2 Problem Statement

Retail investors' investment choices are strongly determined by their experience, with little "guessing" about future opportunities. The subjectivity of investors' decisions to put their money in the share market complicates the situation. It depends on their existing capital, trading knowledge, and perception of investment risks (Verlics, 2013). Therefore, investors should equip themselves with basic investment knowledge and not rush to make investment decisions. A wrong investment decision can cost a lot of money (Verlics, 2013). However, in Malaysia, few researchers pay much attention to the study of behavioral finance. Thus, it is important to conduct research to discover how Malaysian retail investors make decisions when investing in the share market.

Malaysia remains the most popular market for retail investors to invest in for 2022, based on the 2022 CGS-CIMB retail investors' sentiment survey. A total of 1,068 Malaysians participated in the study, which was held from 13th June to 22nd June 2022. It presented that 63% of retail investors chose Malaysia as their top market to invest in. The survey also revealed that investors with higher incomes (monthly incomes worth RM20,000.00 and above) are more

eager to invest abroad in Singapore, Hong Kong/China, and the United States markets because they want to diversify their portfolios and strive for higher returns. According to the survey, retail investors' percentage of trading dropped from 37% in 2021 to 27% in the first half of this year (1H22). Similarly, the buy flow from retail investors for stocks has decreased 79% year-on-year, from RM8.2 billion in 1H21 to RM1.7 billion in 1H22. Their net buy flow for stocks has similarly decreased 79% yearly, from RM8.2 billion in 1H21 to RM1.7 billion in 1H22. In contrast to the previous year, the study discovered that respondents opted to invest directly in the Malaysian stock market and seemed less interested in unit trust products and robo-advisers.

Utilizing a sample of more than 19,000 of the most active Central Depository Account (**CDS**) accounts, representing two-thirds of the total volume traded in each of the most active stocks in August 2020, the Securities Commission Malaysia (**SC**) reviewed the case. Based on this sample, it was discovered that the ACE and Fledgling markets attracted the attention of retail investors, with 83% of their activity occurring in stocks valued below RM0.50. In terms of trading value, local retail investors' participation in Bursa Malaysia (**BURSA**) reached 32%, the highest level in a decade. Moreover, local retail investors continued to be net buyers in 2020, supporting the market, while domestic and international institutional investors sold off their holdings. Local retail investors' net trading value and volume were nearly five times larger in 2020 than in 2019. A 132% increase year-on-year in new individual **CDS** account openings was observed in **BURSA** in 2020. In the same year (2020), people between the ages of 25 and 44 established 64% of the new accounts, indicating a resurgence in interest from a younger population of investors. The main donors to retail ADV in 2020 were investors between the ages of 35 and 54, who contributed approximately half of the average daily volume (**ADV**), or RM794.5 million (Nasihin et al., 2020).

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According to the same **SC** assessment of the 19,000 **CDS** accounts being the most active in 2020, it was noted that 75% of these accounts came from investors over the age of 40, and 87% of these accounts were created before 2020. This might mean that the more established and older investors are still more active in terms of volume. There was a significant increase in market activity on the retail side in 2020. The greater market liquidity, fueled by several reasons, was one of the major drivers of the expansion of the capital markets and the growth in interest among retail investors in 2020. It has been suggested that the pandemic produced a "perfect storm" that resulted in "excess savings," increased market liquidity, and retail investors entering the share market. This "perfect storm" included government stimulus programs, stay-at-home orders that depleted discretionary spending, reduced interest rates, as well as increased accessibility to investing (Nasihin et al., 2020).

In order to enhance its regulatory outcomes, policy revisions, and investor empowerment measures, **SC** organized the "Young Capital Market Survey" in 2022. According to the data, Malaysian teenagers are underrepresented in the capital market. The study was conducted to provide the necessary understanding of young people's involvement in the capital market, and it will be utilized to influence the **SC**'s future work. Note that 1,003 people were included in the nationwide sample, representing market centers, metropolitan areas, and rural areas. The age range of the Malaysian youth representative sample is 18 to 40 years old. The study emphasizes investor behavior, risk appetite, perceived risk of investing, financial literacy, capital market understanding, and reaching out to Malaysian youths' sources for information. Age, household background, as well as responses to information sources that participants deemed "interactive" or obtained are all crucial and pertinent to the present research (Securities Commission, 2022).

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The **EMH** essentially says that all known information about investment securities, such as stocks, is already factored into the prices of those securities. If that is true, no amount of analysis can give an edge over "the market." **EMH** does not require that investors be rational; it says that individual investors will act randomly. But the market is always "right." In simple terms, "efficient" implies "normal." (Thune, 2021). Modern economics and finance are heavily reliant on the ideas of efficiency and reason. Choices are judged according to their rationality, and for the development of theories and the interpretation of empirical data, rationality is frequently taken for granted. Efficiency is the primary, if not the only, criterion used to assess the results of individual decisions and interactions. The aggregation of retail investors' investment decision-making and actions is not a trivial issue, because complexity in the aggregation process could very well vitiate the theory and the formalizations economic modelers find useful. That is, nonadditive aggregation functions can produce complexity that is difficult to explain. Consider for a moment the theoretical advantages of assuming that all actors have full information (Shiller, 2001).

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Rumors come from an unknown source and may thus possibly originate from malicious rumormongers attempting to manipulate the shares market. Yet, a surprisingly large fraction of the takeover rumors come true in the sense that they are followed by a merger bid for the rumored target stock. In many cases, investors would have been right to trade on these rumors. Previous studies (DiFonzo & Bordia, 2007) have questioned the assumptions of the rational actor theory and uncovered evidence that rational behavior is, in fact, not nearly as prevalent as many might be led to believe by mainstream economics. Behavioral finance attempts to understand and explain how human emotions influence financial and investment decision-making processes.

Traditional financing theories allow investors to utilize techniques based on risk-return assessment (Chandra & Nayar, 2008). However, the investor must strongly remember that it is not solely related to the capital and return from the investment. It can be mirrored in how an investor interprets or misinterprets facts that they receive, fooling themselves by questioning if they are superior in intellect but overreacting to market fluctuations. This often happens in the investment environment. Any wrongly interpreted or misinterpreted information can always affect investors' emotions, swaying their judgments (Glasser & Weber, 2003). Nonetheless, when it comes to involving money, investors are irrational when they decide to invest (Tuyon & Ahmad, 2016). Most of the time, they invest by following their instincts. According to Chen (2021), herd intuition is an exceptional mental ability caused by the lack of human decision-making or introspection, leading them to think and behave in a comparable fashion around their society. Hence, herd intuition in finance refers to situations where investors move towards comparable investments almost entirely based on the existing facts. He added that, by nature, people always want to be part of the community to share a common culture and socioeconomic norms. Note that investors can occasionally be brought into the herd whenever they are involved in share investment activities.

Many studies have been done to prove that investors are investing their money blindly. According to Epstein and Pava (2001), nearly 30% of investors do not understand the share market. Meanwhile, Eccles and Klimenko (2020), in their studies, discovered that more than half of the investors buy or sell shares without making any proper checks on the annual reports or performing any analysis. Instead, they prefer to listen to third parties to help them understand reports and news (Pleis, 2009). This is where rumor-based information or so-called market rumors can easily slip in. According to Zhu and Smith (2016), market rumors are talks, opinions, or reports that have no reliable sources or have not been officially confirmed but are

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widely spread. Sometimes, they contain confidential information about public issues; in other cases, they are false. It is risky for less-experienced investors to make any trading decision based on a rumor. Rumors in the stock market always drive the movement of share prices if they are important enough to attract investors' interest, like mergers and acquisitions, an increase in the tariff, or any new act amendment or enforcement. Other than that, investors are worried about missing the opportunity to profit if they do not act on the rumor. Nevertheless, the old Wall Street says, "buy on rumors, sell on news" to reveal investors' decisions (Brunnermier, 2001; Kadan et al., 2015; Benjamin et al., 2015; Moulton & Sandford, 2017).

1.2.1 Unusual Market Activity (UMA)

Retail investors' attention will be drawn to shares that exhibit unusual movement and rumors about them in the share market, which can be compared to a price shock caused by no new information. When phenomena persist without apparent cause, the Unusual Market Activity (**UMA**), **BURSA** will query and allowing the listed issuer (listed company) to determine and make clear to the market whether there has been, among other things, any material, corporate development. **UMA** as defined by **BURSA**, is a circumstance in which a particular share's price or trading activity has changed significantly and without explanation. As a result, one of the ways BURSA ensures market integrity is by issuing **UMA** queries following global best practices.

This does not imply that **BURSA** would automatically send a **UMA** inquiry to the listed issuer when it notices a sudden, significant fluctuation or movement (up or down) in the price and/or trading activity of the shares of a listed issuer. According to **BURSA**, since it is inherent to a dynamic market that prices rise and fall and trading volumes vary according to various circumstances, it is not required to submit a **UMA** query each time there is a major change in

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price or trading volume. Most price and trading activity fluctuations, if not all, can be explained by the fact that a particular share's performance is consistent with the state of the market as a whole or is based on an appropriately timed corporate development or announcement. Apart from that, **UMA** queries will not be sent out when **BURSA** is confident there is an explanation for the unusual trading activity (even if the securities, like the remainder of the market, are always being monitored).

After considering the various elements described in the previous paragraph, the decision to issue a **UMA** query may be made when the price movement and/or trading activity of the shares of a listed issuer is considerable, unusual, or inexplicable. This is because the issue of a **UMA** query is based on specific internal rules and specifications that have been put through a rigorous approval process. The regulations call for evaluating elements such as corporate statements issued by the listed issuer, market developments that affect the listed issuer, market sentiment, industry trends, and analyst reports. **BURSA** emphasizes the purpose of issuing the **UMA** query as being to assist the listed issuer in determining and clarifying to the market whether there is, among other things, any material corporate development that could have caused an increase in the **UMA** (for example, unusual price movement, trading activity, or both). Other than that, a listed issuer is required to conduct a comprehensive inquiry with its directors, key shareholders, and other pertinent parties after receiving a **UMA** query.

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1.2.2 Causes of UMA

Whenever one party possesses more important and relevant information about the transaction than the other party, this is known as information asymmetry. A side lacking sufficient knowledge will probably start a transaction at a disadvantage and risk. As a result, avoiding the negative effects arising from information asymmetries is critical. A responsibility to

disclose, a prohibition on leveraging informational advantages, or a ban on spreading false information are some ways to handle informational asymmetries (Hansen, 2003). Additionally, Putnins (2011) emphasizes that markets are more susceptible to manipulation when there is a lack of knowledge or asymmetries. Runs, contract-based, as well as market power approaches are three types into which market manipulation can be subdivided.

A run begins with the manipulator taking a long or short position in a share. The manipulator would then utilize strategies like rumor spreading, wash sales, as well as pooling to draw liquidity to the shares, inflating or deflating the share prices. A "pump-and-dump" run increases a share price, whereas "bear raids" are the opposite (Zhao et al., 2014). After enough gains, the manipulator's position will be overturned. By taking advantage of investors who either buy at inflated prices or sell at depressed levels. The duration of the manipulation process can range from a few hours to many years. Pertaining to contract-based manipulation, the manipulator makes money from a contract or market separate from the manipulated market, including derivatives. Such manipulation is typically more mechanical because it does not require the manipulator to persuade others to trade at manipulated pricing. Other than that, a commanding position in the supply of security is taken advantage of through market power strategies to profit from exploiting other market participants.

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1.2.3 Categories Causes UMA

The Capital Markets and Services Act 2007 (Act 671) in Malaysia states that insider trading, false or misleading claims, and deceptive trading make up most **UMA** cases. False trading includes fabricating or generating a false or misleading appearance of active share trading (also called wash sales or market rigging). In such transactions, shares are bought or sold without changing who is the beneficial owner of those shares. Share price volatility may be maintained,

increased, decreased, or created by such false transactions. Matching orders, also known as pre-arranged trading, is a method that closely resembles wash sales. It entails entering purchase and sell orders for the same assets at the same time, amount, and price.

Disseminating inaccurate, misleading, or deceptive information about a specific material constitutes making false or misleading statements. Similarly, the term "rumortrage" refers to the dissemination of false or misleading rumors about a company's value to inflate or manipulate share prices (Gerace et al., 2014). Statements, pledges, predictions, and even the dishonest hiding of material facts are examples of the information that may be distributed. The market price of securities may increase, decrease, or remain the same due to such action. Such conduct will likely influence other people to buy or sell shares (fraudulent inducement dealing). The individual making a claim either knows it is incorrect or ought to have known but did not care. This category falls under the use of manipulative and deceptive tools, plans, or artifices to commit fraud.

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The acquisition or selling of securities by or on behalf of an individual or entity possessing significant and non-public material knowledge about the stock is referred to as insider trading. This information might influence the share price if disclosed, and regular investors would want to consider it when making decisions. Therefore, a person is considered an "insider" if they have access to important information that is not publicly known and impacts the value of shares (Securities Commission Malaysia, 2015). Insider trading is considered unethical and should be prohibited at the policy level. Insiders exchange crucial information with the stock market through trading, increasing the transparency and efficiency of share prices and encouraging efficient use of resources (Zhao et al., 2014).

The literature trend indicates that rumor is strongly associated with retail investors' decision-making. Unfortunately, from a scientific point of view, there is not much about rumors, particularly in the financial market. This is surprising since rumors are acknowledged to be a very effective mass media communication route with a very long history (Schindler, 2007). The field of rumor studies is forced to fully believe in a lack of constructive evidence (DiFonzo & Bordia, 2007). In the complex investment trading environment, rumors influence retail investors' sense-making actions (Isik & Tarim, 2009). Many retail investors have a psychological need to comfort themselves from the uncertainty of investment decisions (Thayer, 2011). This is the major weakness of investors when searching for the right and quality information (Segal, 2022). Note that rumors cannot last long; they come and go, and some happen for a few hours. When rumors lack investors' attention, they will easily vanish. The lifespan of a rumor lasts until it is officially announced and turns into confirmed news (Difonzo & Bordia, 2007). Previous studies presented that the market would respond to formal announcements (Rani et al., 2016). However, few studies have been conducted to demonstrate that subjective factors, such as rumor, can play an "invincible hand" in the share market, influencing how retail investors make investment decisions. It is common for those who have focused on studies to test the variant theory on identified specific variables. As a result, it is critical to conduct exploratory interpretive research to bridge the gap, seeking answers from process theory from the "to buy or to sell" standpoint.

Given the importance of the issue and the sensitivity of the retail investor's decision-making on investments, in which the implications are greater, the present study aims to investigate association between rumor and retail investor decisions. This study aims to extend past studies on investment decision-making procedures, develop a theoretical explanation utilizing the Gioia methodology approach, and provide empirical data on the association between rumor

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and retail investors' decision-making. Subsequently, the dependence on interviews in the data collection process emphasizes the saturation of the data, given that an important conclusion can be drawn from findings (Gentles et al., 2015).

1.3 Research Question

Driven by the problem statement, the present study developed the research questions as such:

Research Question 1: What is a rumor from the perspective of social reality?

Research Question 2: What facilitates rumor?

Research Question 3: How rumors are associated with retail investors' investment decision-making?

1.4 Research Objectives

The present study aims to discover additional insights into financial behavior and explore the association between rumor and retail investors' decision-making. Thus, the present study aims are constructed as such:

Research Objective 1: to examine rumor from a social reality perspective.

Research Objective 2: to examine the source that facilitates rumor

Research Objective 3: to explore the association between rumor and retail investors' investment decision-making.

1.5 Significance of the Study

According to Angell (2013), behavioral theory seeks to explain human behavior by analyzing the antecedents and consequences present in the individual's environment and the learned associations he or she has acquired through previous experience. This entry describes the various traditions within the behavioral perspective (classical conditioning, operant

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conditioning, cognitively mediated behavioral theory, and functional contextualism) and the clinical applications that are derived from them. Given the problem statements and research questions, the present study is significant in multiple aspects, especially from the perspective of theoretical and practical applications. First, the present study is significant to financials, particularly in investor decision-making. When it comes to investing their hard-earned money, retail investors in Malaysia are not always as rational as they think.

From Malaysia's perspective, Jamal et al. (2014) in their studies on decision-making for retail investors, claimed that retail investors in Malaysia are rational when making investment decisions. Additionally, Muhammad and Abdullah (2009) claimed that retail investors are just partially capable of reasoning during the time for investment decisions. Psychological interference may lead to better decisions, according to them. Moreover, Tuyon and Ahmad (2016) stay neutral by implementing a bounded rationale involving rational and irrational behavior in retail investors' decision-making. Bakar and Amelia (2016); Jaiyeoba et al. (2017); and Jaiyeoba and Haron (2016) have all linked psychological biases to retail investors' decision-making. Therefore, this study is significant as it upholds rumor as an additional variable in behavioral finance

Other than that, previous findings have motivated the present study to look for valuable data about behavioral finance theory and discoveries that could assist in answering this topic, which would explain why retail investors sometimes behave strangely. The present study has taken a different path to understand the process than the findings suggested by the previous researcher. Seeking the process and understanding is significant as it expands the comprehension of how retailers make their investment decisions, especially when dealing with the elements of rumor. In addition, the fundamentals of the present study are built upon the information extracted from

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the actual retail investors, which will improve existing retail investors' investment decision-making. Thus, this rich descriptive information will be a good source of reference materials and a quick guide for future research purposes for novice researchers, academicians, and practitioners.

Second, a paradigm shift occurs from the positivistic paradigm-based quantitative research methodology to the positivist paradigm-based qualitative research methodology. Instead of quantitatively assessing the respondents' perceptions, the present study emphasizes a significant and comprehensive perspective of the participants' understanding and experience. The use of the Gioia methodology is also another significant element of this study. The findings highlight the research's domains' uniqueness as well as the potential for utilizing a systematic method to help build theory directly from the participants themselves. Subsequently, the outcome will address the gaps by connecting the gathered information (Gioia et al., 2012). This will contribute to enriching and advising the use of the Gioia technique to examine how retail investors make investing decisions.

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Finally, studies on market manipulation may have a big impact from a policy standpoint. Despite heavy fine and punishment for trading on insider information, each time Bursa Malaysia issues **UMA** queries on any listed companies, the retail investor may be able to predict the “standard” replies from them. It is very seldom that the listed companies will explain in detail on the **UMA**. Even though that sometimes certain listed companies may not be aware of the sudden surge in stock prices and volumes, however, if the trading volumes per day accounted for a big percentage of the outstanding shares of the listed companies, the major shareholders may be aware of the reasons driving the heavy trading volumes. This is because usually the key owners of the companies are, at any time, fully aware of the major shareholders

of their companies. Being retail investors who own a very small number of shares in these companies, they need to observe how these companies' response to the **UMA** queries. Otherwise, if there are major corporate developments within the companies in the subsequent periods, there may be certain forms of insider trading during the **UMA** period. As a result, this is the best time for market rumors to be flying around among retail investors, which will certainly influence their investment decision-making.

The regulator's goal is typically to keep the market efficient and fair. Market manipulation research could shed light on the traits of manipulated shares and manipulation strategies, assisting regulators in creating more effective market supervision (Cumming & Johan 2007). Another issue to be concerned about is the minority shareholder, who has a legal right to protection and equal treatment. Although it seems to have been employed infrequently, there is a law and jurisprudence concerning the misuse of controlling powers by the board or controlling shareholders. Minority shareholders are not owed a fiduciary obligation in this case, but it does prevent them from exploiting their rights (Securities Commission, 2015).

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1.6 Scope of Study

The scope of the present study is based in the Klang Valley, Malaysia. The selection of sample locations is based on recommendations by Martinez-Mesa et al. (2016) population consensus. The age range of the study's participants is 24-61 years old, with a minimum of at least five years of investment experience. The selection of the age range is guided by data from the Institute for Capital Market Research (ICMR) Malaysia 2020. Participants will only be identified and considered involved in this study if they meet the basic requirements. Therefore, it focuses only on those individuals who are Malaysian retail investors. This includes investing

via representatives from any investment bank or personal online investment account for at least five years or more.

1.7 Organization of Study

There are six significant chapters in the current work. Chapter 1 is separated into six parts. The first part of the background introduction to the study explains both elements. The second part of the chapter addresses the study's problem statement, whereby the present study brings out the gap in the research topic. The third and fourth parts of Chapter 1 are the research question, the research objective, and the significance of the study. The fifth part is the overall area and focus of the study. Lastly, the organization of this study is presented.

A detailed examination of relevant literature is provided in Chapter 2. The first part of the chapter contains a basic introduction to the topic and a brief discussion on investors. The second part thoroughly discusses previous literature on investors' decision-making based on the previous findings and the identification of gaps. The third part discusses rumor and their basic definitions, followed by explanations of how they can spread in today's modern society. The following part discusses the concept of rumors and how they are associated with investors' decision-making. The last part of Chapter 2 describes the conceptual framework and the identification of gaps in the topic.

Chapter 3 begins with an introduction to the methodology. The present study also discusses eight characteristics of qualitative research in this chapter. The next part of the present study explains the method applied, which is the Gioia method. In this chapter, this study also explains the data collection process, in which interviews will be adapted as the fundamental technique. There are also detailed explanations of purposive sampling and how the researcher selects

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respondents. The Gioia method for constructing data structures is presented, and lastly, the researcher includes a discussion on validity and reliability, including detailed explanations of triangulations and trustworthiness.

Chapter 4 is about data analysis and findings. All the information was gathered in the Klang Valley. A group of 29 participants was interviewed based on their years of investment experience. The number of participants is guided by Creswell (2007). Here, the Gioia method for constructing data structures is outlined.

Chapter 5 is a discussion of the findings. The present study's findings provide insights into rumor from the perspective of social reality, what facilitates rumor, and how rumor is associated with investor decision-making on whether to buy or sell. Subsequently, employing the data structure developed in Chapter 4, a conceptual model was developed.

Chapter 6 is the conclusion of the study. The chapter's concluding remarks revisit the study's goal while summarizing the key results. The research contributions resulting from the findings are then highlighted. Finally, a discussion of the limitations and potential areas for further study follows.

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Chapter 2 Literature Review

2.1 Introduction

For decades, there have been many debates in previous literature like Ahmad and Oriani, (2022); Jain et al. (2019) arguing about the rationality of investors' decision-making when they immersed themselves in the shares market. Traditional finance theories assume investors are sensible and realistic in investment decision-making. On the other hand, behavioral finance asserts that on many occasions, investors act unexpectedly and illogically. Egoism, past experiences, feelings, and instincts have all conspired to pervert their perceptions (Borum, 2003). Nonetheless, humans consider these actions normal when making a decision, especially when dealing with real money, such as share investments. In this chapter, the present study will go in-depth when discussing investors' decision-making, rumors, and how rumors associate with investors' investment decision processes, as well as creating the research's conceptual framework and determining the difference between these two variables.

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2.2 Investment Decision-making

According to Kenton (2022), retail investors like to interact with each other to get the information they need. Communication provides some reassurance, leading to behavioral changes in actions (Kenton, 2022). In his article, the author discovered that investors could be categorized as diffusion and systematic. He also argued that previous studies focused more on institutional investors. On the other hand, Abreu and Mendes (2012) claimed that a positive relationship exists between information acquisition and trading frequency. Shi et al. (2019) explained that communication with others is to seek options and opinions. They applied herding to their observation and explained that people usually follow and stimulate others' behavior. This is to avoid making the decision independently (Baddeley, 2010). Thus, investors will gather sufficient information before investing (Guiso & Jappeli, 2006). Furthermore,

investors will check the information they gathered before acting on their investments (Tauni et al., 2015).

From a psychological perspective, human sentiment can be defined as a feeling that arises in a person's mind when communicating with others. The connectivity between cognition and decisions is closely interrelated. Other than that, the word "sentiment" in the share market variously means erroneous beliefs, irrational beliefs, and investors' decision-making (Shefrin, 2008; Garling et al., 2009; Chang et al., 2012). According to Tuyon et al. (2016), the investor will present an under- or over-reaction to news, whether confirmed or unconfirmed (Baker & Wurgler, 2006). This statement has created strong interest for researchers to discover the reality of the investor's perspective. Baker and Wurgler (2006) stated that behavioral finance significantly impacts stock market investor sentiment. Moreover, in their previous study, Tuyon et al. (2016) claimed that today's behavioral finance perspective supports various behavioral risks, which misleads investors to act rationally in their decision-making. As a result, there has been a surge in interest in behavioral finance research to uncover investor sentiment and behavior.

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2.2.1 Retail Investor

Arbitrageurs and common retail investors are the two sorts of investors who are motivated by trading volume and share price, as per Li et al. (2018) analysis of the financial literature, particularly behavioral finance (Mishra et al., 2016). They continued by stating that market noise and fake signals serve as the common retail investor's guide when making investing choices. In other words, they do not play by the rules and trade their own way. Contrarily, arbitrageurs are more cautious and base their trading decisions on technical or fundamentally grounded analysis. Nonetheless, according to analyses in financial literature, some members of

this group are the least informed in the market (Hirshleifer & Teoh, 2003). Moreover, as per Mishra et al. (2016), this category of investors is most vulnerable to risk anytime the sentiment of the market shifts. As a result of mispricing in share prices and market volatility, there will be a substantial amount of losses (Li et al., 2018).

Chen (2006) characterizes a "retail investor" as any individual or entity, such as a company, who pledges money and anticipates financial gains. Retail investors often make significantly smaller investments than institutional investors. Besides, investments are often financed with personal savings. Despite an investor's demographics, gender, or educational level, Bainbridge (2012) did not outline any special traits for positioning them. In their respective statements, Chen (2006) and Bainbridge (2012) refer to the researcher's comprehension and justification of what an investor means. In contrast, many researchers have prioritized studying financially successful institutions (Bainbridge, 2012).

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On the contrary, retail investors often trade shares through conventional brokerage houses, per Kenton (2018). Most of them now trade stocks online thanks to developments in technology. Many of them are independent traders who are not professionals. As a result, trading is done considerably less often than it is for institutional investors. More than 50 million American homes, he continued, are retail investors. This number reflects the share of investment activities conducted by more than 50% of all households (Evans & Krueger, 2009). Since the implementation of the Economy Transformation Program (**ETP**) as well as Capital Market Masterplan 2 (**CMP2**) in Malaysia, the Securities Commission Malaysia (**SC**) and its stakeholders have launched several initiatives to increase the participation of individual investors in the capital markets, notably the stock market (Petrina, 2019). As per Ganesan's (2012) study, 20% of respondents from Generation Y are willing to take the risk of

stock market investing. As for Generation Y respondents, 37% indicate they wish to invest in Bursa Malaysia. The analysis results indicate that 68.7% of Generation Y will consider investing in the share market.

BURSA is one of Asia's fastest growing bourses. It has documented the highest number of listed companies in Southeast Asia, with over 1200 listed companies as of 31st December 2020 (Bursa Malaysia, 2020). This is partly due to domestic conditions conducive to retail investor participation. Currently, the retail investor cap portion is about half of **BURSA**'s daily transactions, which have contributed a value of RM1.43 billion net to the market (Bursa Malaysia, 2020). If we look at retail investor investment in terms of value, it may be small. However, in the large picture, they contributed nearly 9.4% of the 52% contribution in the financial sector to Malaysia's total gross domestic product (**GDP**) (Tan & Shafi, 2021). From the secondary data above, we can see how important these groups of people can be to the country and the potential chain reaction that might impact Malaysia's whole economic ecosystem. Therefore, the interest in getting to know the universe inside their minds has created a thick scale of interest in conducting a study on this topic.

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2.2.2 Literature Review – Investor Decision-making

A large body of literature like Baker and Wurgler, 2006; Anusakumar et al. 2017; Gao, 2018 has provided evidence that the stock market is heavily influenced by investor sentiment. Although sentiment cannot be seen, it is frequently connected to mood or emotion (Khuu et al., 2017). While the sentiment is not observable, its effects may require a proxy to obtain the results (Chan, 2016). From the statement above, most previous studies mainly focused on the systematic approach to looking for evidence in investor sentiment. In their studies, Beer et al., (2013) have identified many empirical results in measuring investor sentiment. They gathered

previous researchers' studies and explained that Sun et al. (2021) reported that investor sentiment is opposed and not useful in the investor intelligence survey. Besides, Anusakumaret et al. (2017) discovered that individual investors surveyed, forecasted, and expected future stock returns. Moreover, Lemmon and Portniaguina (2006) utilized consumer confidence to forecast shares' investment returns using the investor sentiment index. The comparison result indicates a low return on institutional ownership. In addition, Schmeling (2009) and Zouaoui et al. (2011) confirm investor sentiment in the share market in a broader international context (Khuu et al., 2017).

Previous studies like Daniel et al. (1998) and Hong and Stein (1999) have modeled the role of investor sentiment in their studies. However, all these models are hard to directly test and measure (Brown & Cliff, 2005). Therefore, Baker and Wurgler (2006) developed their popular systematic investor sentiment measurement model. The Baker and Wurgler (2006) sentiment index standardize six widely employed proxies for assessing the equity shares in new issues: the first-day returns on initial public offerings (**IPO**), the closed-end fund discount, investor sentiment, and the dividend premium. In addition, a study on the liquidity aspect is considered a sentiment proxy. Traditionally, new **IPO**s will perform positively because of the large support in volume when they first debut in the market (Brown & Cliff, 2005; Baker & Stein, 2004). Meanwhile, Bialowolski and Bialowolska (2013) examined the external factors influencing investment decisions. Note that external factors are one of the critical areas that the current study must investigate in depth.

From Malaysia's perspective, several studies have been published recently, mostly in the form of empirical studies regarding investor sentiment (Fauzias et al., 2014; Nor et al., 2013). Using survey and market-data-based proxies, the investor sentiment index was created. Later, the

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findings were utilized to analyze further our country's financial instrument indicator (Rashid et al., 2014). Besides, Tuyon et al. (2016) researched investor sentiment and stock return, like studies by Gunathilaka et al. (2017). Moreover, Nor et al. (2014) linked their studies between investor sentiments and bank deposits in Malaysia. There are plenty of outstanding scholars like Fauzias et al. (2014); Nor et al. (2013); Tuyon et al. (2016) who have mentioned the importance of the topic. Unfortunately, it is scarce for them to willingly take up the challenge of conducting the research differently. Hence, the present study would pick up this challenge and contribute something to Malaysia academically and practically.

According to standard economic theory from the studies of Mullainathan and Thaler, (2015), retail investors disregard behavioral difficulties because they believe people act rationally and in their best interests (Peteros & Maleyeff, 2014). The market efficiency hypothesis is one of the most prevalent investment theories, founded on the rational behavioral assumption (Fama, 1970). For ages, other researchers have taken the traditional finance perspective for granted by assuming that most investors are rational when involved in investment activities. However, when a thorough review was done recently, more and more studies on behavioral finance were conducted. This demonstrates that some researchers still intend to reveal the subjectivity component of behavioral finance by demonstrating how rumors influence investor decision-making (Bakar & Amelia, 2016).

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2.2.3 Behavioral Finance

The introduction of the behavioral finance framework has provided a new approach to comprehending human behavior. Utilizing transdisciplinary theories to research has opened new avenues for researchers (Tuyon & Ahmad, 2016). Rational and irrational thinking are the two components that constitute investor decision-making. Firstly, the investor's selection of

investments is not entirely logical because of unforeseeable situations. Many behavioral biases and heuristics are to blame for this situation (Tseng, 2006). Furthermore, the actions were attributed to inadequate knowledge, a distinct learning environment, as well as time-inconsistent preferences by Brocas and Carrillo (2000) and Schilirò (2013). Secondly, strong, impartial human core and neuroscience concerns have an impact on investors' decision-making (Carmerer et al., 2004; Shimp et al., 2015).

As per Ricciardi and Simon (2000), behavioral finance tries to clarify and improve understanding of investors' thought processes, such as the emotional processes partaking and the extent to which they affect the decision-making mechanism. Fundamentally, behavioral finance aims to provide a human perspective explanation of the what, why, and how of finance and investing. The theory of behaviorism, or behavioral psychology, seeks to explain human behavior by examining the determinants and implications involved in one's environment as well as the acquired connections that one has obtained through experience. This is in accordance with Kumar et al. (2022) in their article review of the Journal of Behavioral and Experimental Finance (Angell, 2013). According to this learning theory, all behaviors are acquired through conditioning due to environmental interactions. Hence, behavior is just a reaction to external cues. Investment behavior (Bouteska, 2019), herding behavior (Babalos et al., 2015), financial behavior (Strömbäck et al., 2017), risk preferences (Ranganathan & Lejarraga, 2021), stock market volatility (Bash & Alsaifi, 2019), as well as financial market behavior are all primarily explained by this theory, especially during COVID-19 (Haroon & Rizvi, 2020).

Moreover, behavioral psychological research has shown that people do not always follow the predicted utility axioms (Tversky & Kahneman, 1974). The two-level choice process of

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framing and valuation is the foundation of the prospect theory. Subsequently, the decision-maker builds a representation of the actions, uncertainties, and consequences pertinent to the decision during the framing phase. The decision-maker evaluates each prospect's worth during the valuation phase and then chooses based on that assessment. Note that the economic theory at large supports this. It is predicated on the idea that retail investors make logical choices and seek to maximize their utility. Rational individuals will decide based on what is best for themselves and will not be swayed by emotions or other external influences. Many researchers have examined the theoretical model derived from economic theory concerning asset markets (Powell & Shestakova, 2016), household investment behavior (Fajardo & Dantas, 2018), as well as betting behavior (Buhagiar et al., 2018). The review's outcomes also indicate that the intellectual underpinnings of the most renowned hypotheses come from the associated disciplines of behavioral science, economics, finance, psychology, as well as sociology (Kumar et al., 2022).

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Past research based on Bakar and Amelia's (2016) study on the efficiency of the Malaysian share market has categorized market and economic development stages into three clusters: i. pre-industrialization, liberalization, and information technology revolution; ii. post-industrialization, liberalization, and the information technology revolution; iii. the millennium. Their research aims to develop the Adaptive Market Hypothesis (**AMH**) of behavioral finance in Malaysia and demonstrate its efficacy. They also offer proof from earlier studies that refuted Malaysia's **EMH**. The invalidity of the random walk hypothesis, which assumes the predictability of stock prices (Jarrett, 2010; Ming et al., 2007), the non-linear behavior of stock prices (Lim, 2008; Lim & Hinich, 2005), an indication of long memory in the market (Tan et al., 2014), as well as the fact that the rational expectation assumption does not support the

properties of stock market data are some of the arguments against the **EMH** (Yeong et al., 2010).

Using several empirical research projects, Lim (2008) provides the first investigation to explain the evidence of Malaysian stock market efficiency predicated on the **AMH**. This study discovered that data creation is affected by both linear and non-linear dependencies. According to **AMH**'s hypothesized adaptive nature of price evolution, the nature of price dependency is unstable (Lim, 2008). Other than that, the foregoing behavioral finance research has been suggested as the possible origin of market efficiency instability. The limited rationality of Malaysian investors has been proven by behavioral finance research. This include utilizing technical analysis by Mohamad and Nassir, (1997), referring to recent returns by Richards, (2005), and considering rumors, tips, and gossip as information are examples of irrational actions by Bauman, (1989). Retail investor irrationality results from behavioral biases, which include attention to severe price movements (Toh & Ahmad, 2010), winner and loser (Toh & Ahmad, 2010), and references to prior firm success (Muhammad & Abdullah, 2009).

Other behavioral biases have also been highlighted in market-level studies. First, overreaction, underreaction, and overconfidence biases are caused by a variety of events, such as attention to winners and losers' stocks, market rumors, and speculative political issues (Ahmad & Hussain, 2001; Ali et al., 2012; Ali et al., 2011; Lai et al., 2013). Second, herding bias is due to psychological and sociological influences (Brahmana et al., 2012). Third, momentum-trading bias includes trades based on actively traded securities and sizes (Drew & Veeraraghavan, 2002; Hameed & Ting, 2000). Fourth, culturally induced biases comprise a high level of collectivism in society (Durand et al., 2013; Statman, 2008) and seasonality forces, including the Chinese New Year effect (Ahmad & Hussain, 2001; Wong et al., 1990)

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and Aidilfitri effect (Bialkowski et al., 2012). Fifth, during the crisis, there was a negative bias (Chen et al., 2010). Sixth, speculation bias is also included (Chan et al., 1998), and possibly many more to be uncovered.

From Malaysia's perspective on behavioral finance, Jamal et al. (2014) produced a good discussion. According to them, studies on retail investors' decision-making, like those by Reza et al. (2013); Muhammad and Abdullah (2009), are more focused on the metropolitan area and do not take into consideration other rural areas as fundamental to their studies. They added that Lai et al. (2001) covered a similar topic, specifically focusing on the institutional investor. On top of that, Jaiyeoba et al. (2019) study examined the psychological biases of investors in Malaysia. They determined that Malaysian investors are more into fundamental analysis. Meanwhile, Othman and Ali (2017) studied rumors from a social reality perspective on ethnicity and race in Malaysia. Also, Noor et al. (2018) explained the mechanism of rumor spread, focusing only on one channel, Twitter. All these previous studies' statements convey the meaning of spaces to narrow down the unexplainable loophole.

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2.2.4 Underpinning Theories

According to leading experts in this field, employing prospect theory is more suited to behavioral finance research (Barberis, 2013; Barberis et al., 2001; Shiller, 1999). The prospect theory claims that retail investors behave differently when making decisions: risk-seeking in the loss domain and risk-averse in the gain domain, with the intermediate point serving as the reference point. Hence, inductive reasoning is best suited for inferential analysis in behavioral finance because it accounts for the predicted diversity of retail investors' behavior when dealing with market rumors at the level of individual securities (Nawrocki & Viole, 2014).

Significantly, the prospect theory's postulated adaptable preferences can be verified using this approach.

According to Chen (2021), Amos Tversky and Daniel Kahneman's prospect theory implies that gains and losses are perceived differently and that investors base their decisions more on perceived gains than actual losses. The prospect theory describes how investors make decisions when faced with risky, probabilistic choices. It is especially pertinent to the stock market as it is impossible to predict the likelihood of various outcomes (Chen, 2021). Note that every investor is different, with different perspectives on risk. The incidence and magnitude of negative deviations from the baseline are typically the most significant factors in assessing what is considered dangerous (Chandra, 2008). Furthermore, Kahneman and Tversky (2013) stressed that the investor must combine the two elements of a complex decision after splitting it into two components. The components include revising a difficult judgment into a simple and effortless judgment and choosing from simplified decisions created in the first phase (Gill et al., 2018).

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As per Mongin (1997), the expected utility theory claims that the decision maker (in the present study, it refers to retail investors) compares expected utility values. They are the weighted sums produced by summing the outcomes' utility values multiplied by their corresponding probabilities to decide between risky or uncertain possibilities. This simple and seemingly sensible decision rule raises crucial issues in contemporary decision theory (Chen, 2021). Note that these retail investors will opt for the action that will produce the highest expected utility, which is the consequence of summing probability and utility across all potential outcomes. Retail investors' risk aversion, as well as the utility of other retail investors, will also play a role in their choice. Unfortunately, it is difficult to find studies regarding the behavioral actions

of institutional investors. Many confidential issues must be considered major considerations before beginning research (Mohamad & Perry, 2015; Liu et al., 2015). Other than that, it is rare for scholars to focus their research on retail investors' investment decision-making behavior, especially in Malaysia.

2.3 Rumor

The existence of rumors is as old as human history. In Rome, a woman goddess continuously spread and shouted good and bad news. She was described with wings covering her tongue, mouth, and eyes, playing the trumpet with two horns, representing truth and lies (Crescimbene et al., 2012). In the modern world, rumor can usually be viewed as an unconfirmed assertion concerning topical events (Rosnow & Kimmel, 2000; DiFonzo & Bordia, 2007). It consists of opinions circulating from person to person with no clear source. Rumors can be differentiated from the news because they lack supporting evidence, while the news is supposedly based on validated factual data. In addition, it can be distinguished from other types of informational communication, including gossip, which frequently focuses on individuals and perpetuates social and political goals (Talwar et al., 2020).

Fine and Ellis (2010) stated that there are many debates in defining the term "rumor." It is closely related to gossip, hoax, and urban legend (DiFonzo & Bordia, 2007). Moreover, Fine and Ellis (2010) argued that in behavioral science, a "rumor" is an expression of belief about a specific event that is supposed to have happened or is about to happen. This claim may pique our interest, but it lacks what the larger political system considers certain standards of evidence. Similarly, Sunstein and Vermeule (2009) define rumor as "claims of fact about people, groups, events, and institutions that are not true, but that move from one person to another and have

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credibility not because direct evidence is known to support them, but because other people seem to believe them."

However, if the environment, such as in the shares market, lacks information or news, rumors may be a booster in the source collection process (DiFonzo & Bordia, 2007). Rumor's subjectivity has drawn a line, with information resulting from those who believe it. According to Schindler (2007), investors consider something as information if the outcome is true and a rumor if the outcome is false. The author added that when investors convince them the rumors are true, they will be considered information. Rosnow and Kimmel (2000), however, have a different point of view. They argue that rumors may ultimately prove to be untrue or true. This depends on the rumor's dynamics, which necessitates some verification. When discussing rumors in the share market, Sunstein and Vermeule (2009) suggested rumors can be utilized as a weapon to achieve their hidden investment motives (Dalal et al., 2015). Despite this outcome, little research can explain why rumors are the identified weapon in deceiving others. The empirical studies by Bordia and DiFonzo (2007) demonstrated a marked effect of rumor on investors' decision-making.

Financial rumor, on the other hand, according to Chou et al. (2015), is a message that lacks exactness on certain financial events. The spreading process normally comes from the top to the bottom and vice versa, either internally or externally. The detail might be confidential information, carrying sensitive figures in accounting and other market information. By nature, most of the market rumors in financial markets are useless. It is believed to be the natural character of people who spread rumors intending to provide wrong directions, especially in the share market (Alam et al., 2017; Buszko et al., 2021). Other than that, it depends on the investor to value how reliable the rumor is.

2.3.1 Concept – Rumor

According to DiFonzo and Bordia (2007), the appearance of a rumor is usually from situational unclear, unknown, or unsecured in psychology manner (DiFonzo & Bordia, 2007). DiFonzo and Bordia (2007) also discussed the meaning of the rumor ambiguously when the real meaning or import of a situation is not readily apparent. Nevertheless, the rumor may bring dark sides from individuals as minor and entire nations as major (Goh et al., 2017). They gave examples of the June 2017 London subway terrorist attack and Malaysia Airlines flight MH370 from Kuala Lumpur to Beijing that could not be traced until today. All these incidents have impacted the affected countries' national security and economic ecosystems.

The study of rumor may be grouped into sociology and the psychology of action. For example, Fine (2007) suggested that judgment from the researcher is very important in determining the truth of a rumor. The author added that taking morality seriously is a priority consideration, and people must know how to differentiate the reliability of rumors to avoid harmful reflections (Messick & Kramer, 2001). Furthermore, Rouquette (2007) mentioned that human beings, especially investors, should not easily take rumors as their solutions. Instead, humans should mentally construct a strong, unseen barrier to keep rumors out of their heads. This statement brings out the meaning of how a rumor can easily slip into a human's mind.

Although definitions from the previous researcher of rumor are different, it can be concluded that rumor brings the meaning of instrumentally unverified information spreading among people (Bornia & DiFonzo, 2006; DiFonzo & Bordia, 2007; Fine, 2007; Sustein & Vermeule, 2009). Moreover, rumors lack authenticity, which has brought another angle to the debate on which information is more reliable and trusted in investment decision-making (Dalal et al., 2015). Besides, DiFonzo and Bordia (2004); (2007) mentioned that it is an important element

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to place them in unclear status separate from another route and go in a different direction of "buy at low, sell at high". On the other hand, Zervos et al. (2011); Cartea et al. (2012) stated that when investors were exposed to market rumor (Dalal et al., 2015). Bordia and DiFonzo (2004) assert that the speed of rumor transmission will increase rapidly when an investor shows an interest in believing.

Another important area in the study of a rumor is a social reality. Apart from that, prominent sociologists studying rumor include Auguste Comte, Emile Durkheim, Max Weber, and Karl Marx (Turenne, 2018). In the social sciences, a rumor takes the shape of a claim whose veracity is never or swiftly verified. Studies in psychology, sociology and behavioral finance emphasize the value of researching rumors (Tuyon & Ahmad, 2016). According to Bordia and DiFonzo (2006; 2017), spreading rumors indicates a "collective explanation process". This result was reached based on the coding and analysis of statements from archival message board debates. In these discussions, it was discovered that 29% of the remarks might be classified as 'sense-making' assertions, which contained efforts at decision-making (Bordia & Difonzo, 2006; 2017).

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2.3.2 Rumor Spread

Typically, a rumor spreads from one person to another and may change each time slightly. They may, consequently, evolve and become accentuated and changed. Since rumors can significantly impact society, study into rumors can control and propagate. According to Chen and Wang (2020), research on the rumor-spreading model can be related to the epidemic model since the rumor spreading in social networks is like the epidemic-spreading process. David Jones Daley and David George Kendall initially developed the random model of rumor diffusion, known as the DK model, from the concept of the SIR model of infectious

diseases. Furthermore, Daniel Maki and Maynard Thompson later established a better model known as the Maki-Thompson rumor model (Belen et al., 2011).

Numerous factors affect how rumors propagate, and different personalities will behave differently. By comparing the rumor-spreading process in a scale-free network with the rumor-spreading process in a random network. Nekovee et al. (2005) discovered that the rumor-spreading model exhibits various spreading thresholds in various networks. With the development of technology and new living habits heavily dependent on social media, rumor spreading has become faster. On the other hand, Moreno et al. (2004) explained the rumor-spreading process in intricate networks utilizing mean-field equations. As per Chen and Wang (2020), rumor propagation is a social contagion process in which individuals' actions and social contexts can have an impact.

Rumor transmission theory by Taylor Buckner explained that rumor might lead investors to move towards them utilizing a transmission set, a critical set, or an uncritical set. Simply put, opting for a critical set indicates the investor can distinguish between real and false rumors. Note that investors who choose an uncritical set cannot use their critical ability to determine whether the rumor they hear is genuine. Their critical ability is irrelevant if they employ the transmission set typically encountered in laboratory testing (Huo et al., 2013). According to rumor transmission theory, the "set" of the individual and the structure of the environment where the rumor first appears and then spreads determine whether rumors become true as they are circulated. Gordon Allport and Leo Postman's theoretical hypothesis, known as the "rumor intensity formula," suggests that a rumor's intensity is determined by its significance multiplied by how challenging it is to verify (Turenne, 2018).

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Furthermore, Wang et al. (2013) observed that trust between people might affect rumor spread. They also established a rumor-spreading model that considers the trust mechanism to examine the impact of trust between people on rumor spread. In addition, Diu et al. (2019) stated that there are three attitudes regarding rumors: supported, opposed, and reluctant. They demonstrated that those who are hesitant to spread rumors support them. When it comes to investors' decisions and actions, they depend on their mental states and environment when encountering rumors (Pareto, 2022). Li et al. (2021) suggest that the epidemic model can be used in exploring or understanding such as the spread of rumors (Dong et al., 2019).

Jia et al. (2017) express that social media interactions among friends and family give people room to share ideas and thoughts. Many may not realize that social media is a powerful tool for spreading rumors. Note that this phenomenal growth in our modern technology world indirectly strongly influences share market activities (Shiller, 2001; Davis, 2006). There is also evidence that social media's influence has transformed the form of investment analysis (Baker & Nofsinger, 2002). Furthermore, Shive (2010) confirmed that communication among friends and family members influenced their investment decision-making.

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2.3.3 Rumor and Retail Investors' Decision-Making

Schindler (2007) asserts that since rumors are complex and exist in a special form of information, they must be properly analyzed financially. According to the author, the character of a rumor is heavily influenced by psychological and sociological factors. These characteristics predestined rumor to be analyzed in behavioral finance since the elements have widely varied from all systematic sciences in traditional finance. Other than that, the study of behavioral finance examines the factors that influence people's investment decisions. This

deviated from the assumption of traditional finance and postulated that investors are perfectly rational in their investment decisions (Schindler, 2007).

The key concept in traditional finance theories often relates investor behavior to a degree of rationality. However, it is understood that investor behavior is opposed to these suggestions. It all depends on the individuals themselves (Schindler, 2007). Irrational behavior of investor view as concentrates heavily on the aspect of psychology. This has given room for rumors to spread about the environment. For example, De Bondt et al. (2013) elaborate that because of the uniqueness of rumors, many investors follow each other blindly. This is because all of them are in the same vulnerable position to share the same information (De Bondt et al., 2013). This argument has brought the debate to another frontier, which is investors' cognitive issues.

In the shares market, with the anxiety situation, it always happens that investors will use the popular Wall Street phrase "buy on rumors, sell on news" as their trading strategy. In making the right decision, investors are heavily influenced by cognition (De Bondt et al., 2013). Therefore, Warren (2006) and Sloman et al. (2001) suggested cognitive models are matched to describe investors' decision-making processes and interactions among investors (De Bondt et al., 2013). Olsen (2008) mentioned that the cognitive model describes people's emotions, behavior, and psychological reactions. This includes their perceptions and spontaneous thoughts on situations that influenced them. In investment, investors' perceptions often lead them to develop the ability to recognize, assess, and adjust their thoughts to provide them with more realistic. Additionally, investors learn to recognize what they hear and correct their false ideas. These distorted beliefs heavily influence their investment decision-making. Besides, Bakar and Amelia (2016) concluded much previous cognitive psychology literature that studied how investors think, reason, and decision-making process. According to Gitman and Jochnk

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(2008), various choices and ideas influence an investor's decision-making. Subsequently, biases and beliefs will cause investors to overreact to rumors, making irrational decisions (Bakar & Amelia, 2016).

There are several previous studies, particularly on the cognitive model approach, mainly from empirical studies of the relationship. For example, Luong and Thu Ha (2011) explored individual investors' decision-making influenced by behavioral factors. The study examined the Ho Chi Minh Stock Exchange's performance in Vietnam. The study discovered that herding, overconfidence, and prospects influence investors' decision-making most (Bakar & Amelia, 2016). Moreover, Wamae's (2013) studies investigated behavioral factors influencing individual investors' investment decision-making in Kenya, particularly in investment banks. In their study, results indicate that herding, prospecting, anchoring, and risk aversion are essential factors in decision-making (Bakar & Amelia, 2016). On the other hand, Babajide and Adetiloye (2012) conducted empirical research on investors' behavioral inclinations in Nigeria. The results established that Nigerian investors are heavily linked with status quo bias, loss aversion, framing, and overconfidence (Bakar & Amelia, 2016). Finally, Bashir and Madhavaiah (2015) studied behavioral biases by forming mental accounting, confirmation, status quo, overconfidence, loss aversion, the illusion of control, and excessive optimism in investors' decision-making. They discovered four dimensions, the illusion of control, excessive optimism, overconfidence, and confirmation biases, that significantly affect investors' decision-making. However, mental accounting biases, the status quo, and loss aversion bring opposing results (Bakar & Amelia, 2016).

From a theoretical point of view, rumor is classified as something little known, particularly in the shares market. The complexity of the rumors associated with investors' decision-making

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makes it difficult to put them into research. This has created a unique phenomenon where poor findings can be established, leading to the loophole the present study intends to investigate by exploring the topic's subjectivity and bridging the missing gap.

2.4 Definition of Conceptual Framework

McGaghie et al. (2001) defined a conceptual research framework as synthesizing a past review of explaining a situation. It draws out a simple map of the topic to be studied, combining past literature to answer the research question and observations about the research. Other than that, the researcher's comprehension of how the mean variables in their study relate to one another is known as the conceptual framework. As a result, it outlines the variables needed for the research investigation and the researcher's plan (McGaghie et al., 2001).

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2.4.1 Conceptual Framework

From the explanations, therefore, an initial idea of the conceptual framework in the current research study can be observed in **Figure 2.1**:

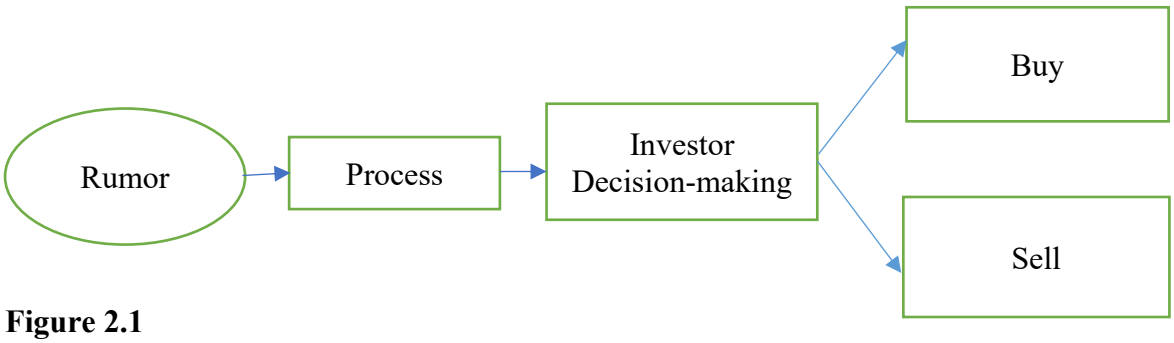

Figure 2.1

Conceptual Framework

2.5 Identification of Gap

The unique characteristics and complexity make the task difficult to model rumor. Note that previous researchers have focused on only partial aspects. From the result, they identified two major aspects of modeling rumor in their studies, which is the transmission process and consequences. Most developed models mainly focused on the transmission process compared to the outcome of consequences (Schindler, 2007). Bruckner's theory of rumor focuses on the transmission mechanism by which rumors evolve. The author tested two variables, namely the serial chain and multiple networks, and discovered that effects on the frequency of rumor transmission are formed naturally (Schindler, 2007). Apart from that, most previous rumor modeling was conducted utilizing the empirical method but no explorations. This evidence has once again demonstrated that studies on discovering from a social reality perspective the mechanics of facilitating rumor and how the rumor process is associated with investor decision-making must be conducted to contribute to closing the gap.

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2.6 Summary

The literature review on the study of investors' decision-making has been thoroughly discussed in the present study. In general, investors' decision-making has a decent list of established theories that other researchers often use to support their findings. On the other hand, four theories have been identified as the major pillars to support the present study: behavioral reasoning theory, attribution theory, prospect theory, and expected utility theory. Besides, applications of the rumor-spreading model and rumor transmission theory are employed to explain the rumor utilizing the epidemic model and explain why investors make a critical, uncritical, or transmission-type set of decisions towards it (Huo et al., 2013).

Chapter 3 Methodology

3.1 Introduction

This chapter of the research will describe the methodology. It will also explain the adapted model, theories, sampling techniques, data collection methods, and data analysis.

3.2 Methodology

David Abram (2012) describes that the curious character of human beings makes them always look for truth and answers. Greek philosophers, such as Aristotle and Plato, assured a series of actions taken systematically, absolutely, and logically to gain understanding. The author added that great philosophers such as Edmund Husserl, Immanuel Kant, William Dilthey, and Merleau-Ponty had mentioned before that the life content of human beings is a combination of experience and complex interaction activities, among others (Kliman, 2010). This has driven home the point that humans, regardless of context, social or cultural, cannot understand what they share with others. As a result of their previous outstanding research, these philosophers have created a qualitative paradigm.

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Moreover, Williams (2007) revealed that the real meaning of research is unsystematically searching and documenting information and collecting evidence (Leedy & Ormrod, 2001). They continued by stating that the research flow systematically identifies the purpose, handles data, and reports findings while adhering to established frameworks. To put it simply, research is the process of acquiring, examining, and describing evidence to evaluate a situation (Leedy & Ormrod, 2001). The data gathered will guide and explain how to conduct the research and an appropriate paradigm, and the results will substantially influence the research's structure (Leedy & Ormrod, 2001).

On the other hand, Creswell (2013) suggested doing qualitative research, and the researcher needs to underscore the importance of understanding the beliefs and theories. The research question is utilized to determine which paradigm can fit into the research. The appeal of qualitative research is that it allows for the exploration of the subject's true significance, the development of hypotheses, and the resolution of the study's problems and research questions. When the identified variables are difficult to measure, further investigation is required. The author added that researchers conduct qualitative research to enhance individuals' knowledge, thoughts, and experiences. The real motivation of the present study is to explore the social reality of the investors, empowering them to share their stories about their decision-making, which is buying or selling shares. Thus, the present study tends to discover how rumors can easily immerse themselves in investors' minds when they make their decisions.

3.3 Qualitative Research

According to Creswell's (2013) explanations, a qualitative data collection method could involve visiting a research site and observing people's behavior without asking them specific questions or conducting interviews where people can speak freely without being given a specific subject and largely without the use of questions. This depends on the technique utilized to identify the data that must be gathered (Creswell, 2013). The data studied might be text information that records and reports participant voices or numerical data acquired on instrument scales. Additionally, researchers may analyze statistical findings, or they may interpret the themes or patterns that appear in the data. The author adds that open-ended observations might be added to instrument data or that in-depth exploratory interviews could be conducted after census data (Creswell, 2013).

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As mentioned in the previous paragraph, there are several techniques to collect data in qualitative research. The most widely utilized method is interviewing. However, researchers often raise the question of where to start and when to stop. For example, Charmaz (2008) suggests that the quality of the data gathered should be determined by the research's substance, scope, and relevance. Thus, the author suggested some guidelines to ensure the adequacy of the data collected:

i. Considering the importance of the data for comparison and category development.
ii. Looks beneath the superficial layers of data.
iii. Offers in-depth information about the opinions and behaviors of participants.
iv. Captures the range of context, perspective, and timeframes.

Some similar strategies in Charmaz (2008) and Creswell (2013), like taping, transcripts, field notes, and memos, ensure the data collection generated and utilized can be more justified.

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3.3.1 Characteristics of Qualitative Research

Creswell (2013) listed eight qualities that define qualitative research. The design of Creswell (2013) includes similar characteristics from the previous studies by Margaret LeCompte and Jean Schensul; Hatch and Johnson (2002); and Marshall and Rossman (2010). The suggested characteristics are too close to involvement and highlight the interpretive nature of quantitative research inquiry. The eight characteristics explained below address the rationale of the present study in the choice of paradigm, which is qualitative research methodology.

3.3.1.1 Natural Setting

Data is often collected from the area where identified participants have gone through the real situation and the difficulties or problems of the study. The researcher will not bring the participant into a lab nor send any instruments to get the data, like the survey research done in

quantitative research. Instead, researchers normally meet face-to-face with participants and gather the information needed by talking directly to them. From there, the researcher will record their actions and behavior (Creswell, 2013). As the present study seeks to understand the issue of rumor and its association with investor decision-making, the research needs to gather information from the field. As Creswell (2013) stated, the researcher must meet up with the participants to acquire direct information based on the participants' experiences. Note that it is also the intention of the present study.

3.3.1.2 Researcher as Key Instrument

In contrast to quantitative research, qualitative research is an instrument. Because they participate in conducting in-depth interviews and consider the significance of the data, researchers in qualitative research are viewed as research instruments. Data is collected through the process of interviewing the participants or observing the participants' behavior (Creswell, 2013). The present study explores the association between rumor and investor decision-making. Thus, the present study must be the key instrument. The main features of data collection involve seeking the participants' information, as in the present study, which must be involved in setting up and conducting the study. Therefore, the present study is the key instrument to serve the purpose of the study and answer the research question of how rumor is associated with investors' decision-making.

3.3.1.3 Multiple Methods

Qualitative researchers gather data in multiple forms, which can be in the form of interviews, documents, and observations. The data gathered will be reviewed and made sense of it. Subsequently, it will be reorganized into various categories and themes (Creswell, 2013). Here, the present study proposes to gain information from the interview. Section 3.5 (Data

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Collection) detailed the method used in the current research study, which supports utilizing a homogeneous data collection method in answering the research questions.

3.3.1.4 Complex Reasoning

Note that this characteristic is based on reasoning through inductive and deductive logic. The structure of qualitative research is built from the bottom up, from patterns, categories, and themes. More abstract information is added as the material is inductively organized, as some researchers call 'snowballing' (Kirchherr & Charles, 2018). The data-gathering process requires the researcher to keep going back to the participants to obtain the themes and data and to constantly check against the themes until they can establish a comprehensive set of results (Creswell, 2013).

3.3.1.5 Participants' Meaning

The real meaning of doing qualitative research is that the researcher will acquire rich data and focus on exploring the real meaning of participants' claims. The direction and aim are always with the participant, not the researcher. The focus must be clear to answer the research questions and issues (Creswell, 2013).

3.3.1.6 Emergent Design

In qualitative research, the research design may change or shift occasionally. This process usually happens when researchers are involved in the field and begin collecting the data. Other than that, Creswell (2013) did provide an example of how the questions asked, the form of data, the individual studied, and the site visited may be changed or altered from time to time. On the other hand, the key meaning of qualitative research is always linked back to the research problem and topic issues (Creswell, 2013).

3.3.1.7 Reflexivity

In section 3.3.1.2, one of the characteristics of the key instrument is explained. In qualitative research, the researchers serve as the primary data collection instrument. Thus, it is advised for those involved in the qualitative method to position themselves in this paradigm circle. Interpretation of the information must focus on the participant, not the researcher (Creswell, 2013). In the present study, focusing on the participant's answers was the main concern in collecting data. It is also a reminder to present the study utilizing simple, easy-to-understand questions to let participants talk more about their experiences.

3.3.1.8 Holistic Account

Researchers are advised not to fixate on cause-and-effect relationships among factors but to identify the complexity of the data gathered (Creswell, 2013). From Creswell's (2013) suggestion, all the characteristics fit into this study topic, as the present study intends to understand how rumors are associated with investors' decision-making. Thus, adopting this suggestion will be a guideline in the study's methodology assumptions.

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3.4 Gioia Methodology

The present study employed the Gioia methodology in qualitative research to present a "systematic approach to new concept development. Meanwhile, grounded theory articulation designed to bring 'qualitative rigor' to the conduct and presentation of inductive research" (Gioia et al., 2012). The methodology aids researchers in comprehending the modifications they are making and dealing with, as well as how those meanings change (Langley & Abdallah, 2011). The present study adapted the Gioia methodology by executing it to develop first-order codes. Subsequently, it will process them into second-order themes and aggregate dimensions (see **Appendix 5**). The nature of the present study requires an inductive approach to analyze

the data. Thus, it is suitable to adapt this method for the present study. The beginning of the analysis is to develop first-order codes, followed by second-order themes, and finally, aggregate dimensions.

Gioia's methodology starts by recognizing the initial concept, followed by grouping them into categories based on participants' responses, referred to as "first-order codes." It is a non-biased view or method to fully tabulate the responses received in their raw form. Once all the data are compiled and tabulated, they will be followed by the second analysis stage. This is where the focus of the study shifts from participant-centric to researcher centric, whereby those first-order codes emerge through more detailed interpretation to form second-order themes. This will go through another round of analysis to identify the resemblance of the emerging themes, which will later result in an aggregate dimension (Gioia et al., 2012). First-order data is typically based on semi-structured interviews, with second-order data emerging to recognize concepts. The emerging data structure is a crucial step where the progression of first-order data theoretically associates with second-order concepts. Finally, it is important to keep the focus on the goal of constructing a vigorous model.

The present study generally adheres to the principles set forth by Dennis Gioia and Kumar Chittipeddi in their Gioia methodology overview from 1991, as well as those improved by Gioia et al. (2012). The Gioia method offers a systematic way of developing new concepts and articulating grounded theories as "an attempt to bring 'qualitative rigor' to the conduct and presentation of inductive research" (Gioia et al., 2012). At the early stage, a large amount of information emerges. Here, Gioia et al. (2012) suggests distilling in categories, whereby the present study identified it as first-order codes. Consequently, second-order themes will emerge from first-order codes, followed by aggregate dimensions.

3.5 Data Collection

The current research aims to discover the association between rumor and the retail investor's decision-making process, whether to buy or sell. In the present study, data were collected in the Klang Valley. A group of 29 participants has been identified based on their years of investment experience. The number of participants was guided by Creswell et al., (2007). As suggested by Schindler (2007), all participants' trading frequency should be at least 12 times (once a month) or more. A sufficient sample size is needed to address the complexity and subjectivity of the present study. Note that approximately 2 hours of semi-structured and slightly loose interviews were conducted. The present study was able to secure face-to-face interviews in places convenient to them, such as their offices, a cafe, or the participant's home. All in-person and on-line interviews occur from December 2019 to December 2021.

3.5.1 Data Collection Process

Dudovskiy (2018) mentioned that data gathering is a process of obtaining data from relevant sources to answer the research question by coding, processing, and evaluating the outcomes. Frances et al. (2009) added that the major concern in qualitative research is understanding a phenomenon and explaining its nature. Considering privacy and the confidential nature of the present study, observation and documentation must be excluded from suggesting the data collection method in qualitative research. The purpose of the present study is to comprehend rumor processes and investors' decision-making. Therefore, the one-on-one interview has been identified as the most suitable data collection tool in the present research. The topic of the study itself served as the basis for the method chosen in the current investigation.

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3.5.2 Data Analysis Process

The present study adopted the Gioia et al. (2012) data analysis method, consisting of four primary steps. First, to capture each participant's general experiences and opinions, narrative summaries were created for each respondent (see **Appendix 2**). Second, first-order concepts were developed by analyzing interview transcripts (see **Appendices 3a, 3b, & 3c**). Thirdly, relationships between these themes created aggregate theoretical dimensions by grouping first-order thoughts into more abstract second-order themes (see **Appendix 4**). Lastly, relationships among themes, concepts, and categories were identified using the data structure and developed into a conceptual framework of rumor associated with investors' decision-making (see **Appendix 5**).

The interview data acquired from the participants became the initial data coding process while keeping the integrity of first-order terms. It is key to consolidate all first-order terms and develop a comprehensive compendium. Subsequently, by sorting similarities and differences, first-order terms can be further reduced into a more manageable quantity with proper labels and descriptions attached. The second-order analysis requires another process cycle to identify emergent themes, especially nascent concepts that clearly define the phenomenon. It is also important to further consolidate the emerging second-order themes into second-order aggregate dimensions. The second-order themes and aggregate dimensions were created utilizing first-order terms as a starting point. This served as the foundation for creating a data structure, which is the key component of the overall study methodology. The data structure is essential for displaying rigor in qualitative research. Not only is it possible to arrange the data into an understandable visual aid, but it also presents graphically how the analysis developed from the raw data to the terms and topics used in conducting the analysis (Pratt, 2008; Tracy, 2010).

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3.6 Interview

According to Qu and Dumay (2011), research interviews have relied on the level of structure (DeJonckheere & Vaughn, 2019). Generally, the structured interview is more straightforward. Typically, the researcher will designate some questions for the respondents. The question directions are fixed and in accordance with the subject. Consequently, all participants were asked the same questions. The participant will answer according to the sequence of the questions on the list. Note that conducting structured interviews is more geared towards looking for certain objective data. The character of the neo-positivist is heavily linked to structured interviews. In a nutshell, neo-positivists are more concerned with identifying a conscious goal (Qu & Dumay, 2011).

On the other hand, there is another way of interviewing with an informal free-flow structure, known as an unstructured interview (Corbin & Morse, 2003; Gill et al., 2008). There are no rigid barriers in an unstructured interview, as questions ask about the research topic. As a result, participants are more relaxed and stress-free during the interview session. The present study begins with casual or informal conversations, as Fontana and Frey (1998) suggested. Correspondingly, it is followed by recording when the participant is ready, and the data will be gathered. It is assumed that the participant is unaware of the questions or related topics that will be asked. Here, Berg (2009) explained that interviewers are described as "compassionate listeners" to explore the inner lives of the participants.

Other than that, Yilmaz (2013) asserts that people would love to share their social life experiences. As Qu and Dumay (2011) proposed, the purpose of unstructured interviewing is to enter the participant's life and not to put any influences on their mind. Therefore, the researcher must adapt, develop, and quickly respond to follow-up questions relating to the

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research purposes. At the start of the interview, rapport-building exercises should be conducted (Zakaria & Musta'amal, 2014). There is also an alternative suggested by Berg (2009), known as long interviews. At that time, it was considered the ideal method for conducting qualitative research. A long interview applies a free, unstructured questionnaire and has planned to "accomplish certain ethnographic objectives without committing the investigator to be intimate, repeated, and prolonged involvement in the life and community of the interviewee" (Qu & Dumay, 2011). It is undoubtedly good, but the session process usually lacks proper direction and might be very time-consuming.

The main purpose of the present study is to understand how rumors are associated with investors' investment decision-making. As Creswell (2013) suggested, the interview has been identified as the most suitable technique to gather data from the participant. The duration of each interview conducted was approximately 2 hours. In the present study, the first few minutes start with casual conversations regarding current issues like COVID-19 and Malaysia's overall economic conditions. As Fontana and Frey (1998) suggested, the process is needed to let the participant feel relaxed and open without any gap between the present study and the participant for the following conversation. Audio recording and memoing begin when the participant answers the present study's question. Therefore, the present study follows the interview guidelines suggested by Creswell (2013), combined with Fontana and Frey's (1998) casual conversations and semi-structured interviews suggested by Drever (1995) and Kvale and Brinkmann (2009). Apart from that, detailed explanations of the semi-structured interview are in the following paragraph.

A technique also acts as an intermediary between structured and unstructured interviews, bringing hybrid achievement to the present study: the semi-structured interview. The semi-

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structured interview is more flexible, accessible, and intelligible, and, most importantly, it can reveal significant and frequently overlooked aspects of human behavior (Bryman & Bell, 2003; Qu & Dumay, 2011). Apart from that, Kvale and Brinkmann (2009) later challenge Berg (2009) by describing beside unstructured interviews, the semi-structured interview also can consider one of the most successful methods in producing the outcome of the data gathered. Kavle and Brinkmann (2009) mentioned that qualitative research interviews aim to comprehend the topics of the subject comprehended and tell daily life. Consequently, to fulfill the current study's purpose, this study must adopt semi-structured interviews. As per DeJonckheere and Vaughn (2019), when the sample size of a research study is relatively small, the adaptation of semi-structured interviews is a perfect choice.

For the semi-structured interview to elicit the participants' most detailed responses, a skilled researcher must adjust the questions' style, pace, and order (Mack et al., 2005). The researcher must be equipped with skills when asking questions. Participants may answer utilizing their languages and terms (Qu & Dumay, 2011). According to Denzin and Lincoln (1998), when a different researcher asks different questions, the outcome of semi-structured interviews has many answers and directions. The unmanned exploratory requires the researcher to return to the same participant and do the follow-up actions.

Blandford (2013) explained that the best way to collect data from interviews is through normal conversations. The author further explained that a structured interview usually needs some mechanism to obtain the data, which is more likely to be a questionnaire. When a questionnaire is utilized in a structured interview, the researcher cannot expect a wide variety of answers. Furthermore, casual conversations are important in an unstructured interview and within the research topic. Semi-structured interviews fall somewhere in the middle of structured and

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unstructured interviews. From this point of view, the present study completely agrees with the author's idea and provides this topic with the weight it deserves. It starts with a casual and unstructured interview, followed by a semi-structured interview during the data collection process.

No doubt, interviewing is a technique that helps a researcher to ask directly into participants to share their real-life stories. Sharpening interview skills can help the researcher understand more about participants through their storytelling process. A skilled researcher can explore the complexity of lived experiences, gain in-depth participants in their research, and discover unexpectedly or during the process of shade of meaning in the stories. Therefore, by following Fontana and Frey's (1998) and Creswell's (2013) suggestions, a qualitative researcher should develop and utilize a protocol when interviewing qualitative research. Interview protocol includes more than just a set of interview questions. It also includes the formal setting or extent of the interview. Researchers apply handwritten notes and audio or video recordings to capture participants' information. Interview protocols serve as a formal roadmap for leading a novice qualitative researcher through the interview process, in addition to a set of questions (Jacob & Ferguson, 2012).

Creswell's (2013) interview protocol recommends researchers take short notes during that interview session, even though the session is taped. This is to avoid any equipment failures during the session. The author added that in the audiotaping process, the researcher should plan to transcribe the audiotape. Thus, the present study adapted his suggestion by drawing the interview protocol as below:

a. A heading (Gender, Age, Occupation, Year of Investment Experiences, Investment Method, Date of Interview (**Table 3.1**).

b. Guidelines for the researcher to adhere to ensure that standard practices are applied from one participant to the next.

c. The questions, which frequently served as the sub-questions in a qualitative research plan and began with a self-introduction question, were followed by six to eight further questions. Subsequently, they were followed by concluding questions. This action seeks future reference if the research needs additional clarifications (see **Appendix 6**).

d. Standby four or five probing questions for participants to elaborate or explain further what they have said.

e. A word of gratitude for the participants' time.

f. Create a log to keep track of the information gathered for analysis. In this record, it will be useful to note whether the information is primary or secondary (Creswell, 2013).

3.7 Purposive Sampling

According to Crossman (2018), the sampling units' selection is very subjective. In purposive sampling, there is no need for any set of participants or underlying theories. Selections are based on the research objective, and the researcher's judgment, with priority selection, goes to the participants with knowledge and experience willing to share information (Bernard, 2002; Tongco, 2007). According to Patton (2002), this technique is widely utilized in qualitative research to identify relevant available resources. Supported by Palys (2008), the synonyms are closely referred to in qualitative research of the directions, which might have many different angles. The qualitative researcher is more interested in knowing more about how the participants feel, think, and experience. The crucial aspect is the participation willingness as well as the ability to communicate and express true, meaningful experiences (Bernard 2002).

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Apart from that, Patton (1999) mentioned that the soul of purposive sampling lies in fruitful information and in-depth study. The adaptations should be useful for researchers with an exploratory mindset when conducting research. There are many strategies for selecting purposive samples suggested by previous academicians in their previous studies. In this section, the present study will underpin strategy methods mainly suggested by Patton (1999) as guidelines to identify the most suitable strategies for the present study. According to Kirchherr and Charles (2018), traditionally, sampling methods consist of two elements, sample frame from the list of identified members or the number of prospects. Another element refers to specific data collected from the sample frame (Sedgwick, 2013). From past studies, a quote from a prominent researcher like Professor John. W. Cresswell expressed, "The intent of the qualitative study is not to generalize to a population but to develop an in-depth exploration of a central phenomenon." According to Naderifaf et al. (2017), it takes time to impact selected samples because the process is very slow. Note that the rolling collection of data becomes bigger and bigger until the necessary data are saturated.

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3.8 Choices of Participants

The present study aims to gather as much information as possible from the investor. Therefore, the statement above has provided a clear direction for applying the technique. According to Sargeant (2012), the right participants in research who represent a subset of society's population are honorable and meaningful to the individuals. Therefore, utilizing non-probability sampling is based on the conceptions of "analytical generalization" and "theoretical saturation" (Yin, 2014). Commonly known, non-probability sampling is not suitable for quantitative statistical research, but it is appropriate for qualitative research. Some examples are convenience sampling, consecutive sampling, and purposive sampling. Hence, purposive sampling is adequate and appropriate for this research. Interviews can demonstrate to researchers another

option for gathering the data they need. Other than that, interaction with identified prospects allows the researcher to read the prominent models, divisions, and aspects (Kwortnik, 2003). The researcher may saturate the pattern based on the mentioned elements by gaining an objective view of the prominent models, divisions, and aspects (Thomson, 2011).

3.8.1 Profile of Participants

As explained in Section 3.5, data were gathered in the Klang Valley from 29 participants who have been identified based on their years of investment experience. Klang Valley has been identified as the most suitable location to collect the data because it represents a quarter (8.42 million) of the total population (32.7 million) in Malaysia (DOSM; Macrotrends). The number of participants is guided by Creswell (2013). Note that sufficient sample size is needed to answer the complexity and subjectivity of this research. Researchers could secure a face-to-face interview in places convenient, such as offices, cafes, or the participant's home. **Table 3.1** provides a thorough description of the participants.

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Table 3.1

Descriptions of Interviewees

Participant	Gender	Age	Occupation	Years of Investment Experience	Participant's Investment Method	Date of Interview
P1	Male	38	Remisier	18	Online, Offline	3/12/2019
P2	Female	54	Accountant	22	Online, Offline	4/12/2019
P3	Male	29	Salesman	6	Online, Offline	23/12/2019
P4	Male	56	Retiree	30	Online, Offline	1/1/2020
P5	Male	50	Remisier	12	Online, Offline	3/1/2020

P6	Male	38	Fulltime Trader	6	Online, Offline	6/1/2020
P7	Male	53	Manager	26	Online, Offline	2/3/2020
P8	Male	29	Executive	6	Online, Offline	6/3/2020
P9	Female	26	Executive	5	Online, Offline	6/3/2020
P10	Male	61	Retiree	34	Online, Offline	8/3/2020
P11	Male	55	Businessman	26	Online, Offline	1/5/2020
P12	Male	33	Manager	10	Online, Offline	19/5/2020
P13	Male	26	Executive	5	Online, Offline	6/6/2021
P14	Female	24	Executive	5	Online, Offline	6/6/2021
P15	Female	31	Executive	5	Online, Offline	6/6/2021
P16	Male	53	Company Director	22	Online, Offline	8/9/2021
P17	Male	56	Logistic Manager	20	Online, Offline	19/9/2021
P18	Male	51	Salesman	16	Online, Offline	4/10/2021
P19	Male	31	HR Manager	13	Online, Offline	8/10/2021
P20	Male	49	Senior Manager	24	Online, Offline	4/11/2021
P21	Male	55	Senior VP	24	Online, Offline	7/11/2021
P22	Female	55	Compliance Manager	19	Online, Offline	3/12/2021

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P23	Male	48	Compliance Manager	14	Online, Offline	3/12/2021
P24	Male	52	Remisier	19	Online, Offline	7/12/2021
P25	Female	52	Company Director	15	Online, Offline	23/12/2021
P26	Male	51	Company Director	19	Online, Offline	24/12/2021
P27	Female	52	Senior Director	19	Online, Offline	28/12/2021
P28	Male	56	Company Director	23	Online, Offline	31/12/2021
P29	Male	55	Company Director	24	Online, Offline	31/12/2021

Adapted from Creswell (2013).

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3.9 Validity and Reliability

Qualitative research quality is significantly improved when the findings convey the information presented legitimately and reliably (Creswell, 2013; King & Horrocks, 2010; Merriam, 2009). Therefore, it is logical that any subsequent research would only wish to refer to trustworthy findings or conclusions. At times, qualitative research is subject to questions on subjectivity limitations, as one factor that promotes knowledge of a phenomenon is subjectivity itself. Regardless, the validity and reliability of qualitative studies have always been a concern. Still, according to Merriam (2009), various strategies based on philosophical assumptions premised on the participants' worldview to enhance the trustworthiness and authenticity of the study.

Validity and reliability guide qualitative researchers to conduct the study ethically to ensure the outcome or result is trustworthy. Research conducted systematically and rigorously will ensure the reliability and validity of the research findings and increase others' confidence. As per Merriam (2009), reliability and validity must be considered at every investigation stage, from data collection through analysis and interpretation to the point where the results are delivered. The qualitative research community has listed many strategies to enhance a study's reliability and validity (Creswell, 2013; Merriam, 2009), including reliability, internal and external validity, objectivity, and research ethics. Note that the reliability and validity requirements that served as the study's primary guiding principles were properly followed. As there could be topical, complex, and sensitive information, there is a need to comply with the validity and reliability requirements.

3.9.1 Validity

Validity in research can be defined as the accuracy in the authenticity of the research topic's findings. A valid instrument must demonstrate good research and an accurate measurement standard to be considered valid (Mohajan, 2017). Validity in qualitative research entails rigor and upholding the standard of the 76 studies. In the present study, triangulation and trustworthiness were considered to meet the validity requirement.

3.10 Triangulation

To ensure validity and reliability, the triangulation of findings provides rigor and a more profound understanding (Flick, 2018). The present study will triangulate data utilizing the interview as the data source. These are intended to support the study and provide a way to validate the research's findings (Merriam, 1998). Hence, there might be a need to repeat the interviews with some respondents at different times to validate their earlier responses. With the

above-proposed triangulation methods, the credibility of the research findings can be improved further.

3.11 Trustworthiness

The insights or discoveries must be regarded as reliable by other researchers or practitioners for research to influence theory or practice (Merriam, 2009). It is simply defined as the convincing finding or conclusion of research following adequate procedures or processes. In the present study, qualitative methodologies were utilized to assure reliability and rigor in accordance with recommendations, confirmability, transferability, credibility, and dependability (Creswell, 2013; Stahl & King, 2020). The faith that can be put in the truth of the study results is known as credibility (Holloway & Wheeler, 2002; Macnee & McCabe, 2008). It determines whether the research results are a valid interpretation of the respondent's original opinions and indicate plausible facts derived from the respondent's original data (Graneheim & Lundman, 2004). For the present study, credibility strategies such as adequate and prolonged engagement, triangulation, and member check (see **Appendix 7**) will be employed (Stahl & King, 2020).

Transferability is the interpretive equivalent of generalizability and refers to the extent to which qualitative research findings can be applied to other situations with different respondents (Bitsch, 2005; Tobin & Begley, 2004). As described earlier, the present study will embark on purposive sampling, also part of the transferability strategy (Anney, 2014; Stahl & King, 2020). Dependability, as per Bitsch (2005), is "the stability of findings across time." Dependability entails respondents assessing the study's conclusions, interpretation, and recommendations to ensure that all of them are supported by the information gathered from the research's informants (Tobin & Begley, 2004). For the present study, dependability was established utilizing peer

review (see **Appendix 8**). Other than that, Bitsch (2005) stated peer review enables the researcher to be truthful about the study they have performed and to contribute to a more in-depth reflective analysis (Stahl & King, 2020). The term "confirmability" describes how easily other researchers could confirm or corroborate an investigation's findings (Nowell et al.,). Confirmability is "concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but are clearly derived from the data" (Tobin & Begley, 2004; Stahl & King, 2020). For this current research, confirmability was achieved via triangulation.

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Table 3.2

Validation Strategies for The Present Study

No.	Validation Strategy	Description of the procedure followed in this study
1.	Triangulation	Employing interviews as the major data source.
2.	Members Check	Referring to the research participant to confirm the tentative findings based on their submission in the interview encounter with the researcher.
3.	Peer Review	Four (4) PhD candidates from work colleagues were selected to review and compare the data and the emergent categories. They will investigate the raw data and the coding process until the data structure and validate the initial model proposed by the present study. The present study's supervisor will also review on top of the peers (see **Appendix 9**).
4.	Adequate Engagement	The present study was very much involved in the entire research process. Adequate time spent on data collection to the data saturation. The period of data collection range is estimated to be between 9-24 months.
5.	Purposive Sampling	It assists the present study in concentrating on informants that are knowledgeable of the research issues.

Self-Organized by Present Study

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Chapter 4 Data Analysis

4.1 Introduction

In this chapter, the researcher will discuss analyses and findings. This study aims to discover the association between rumor and retail investors' decision-making process (to buy or sell). The information was gathered in the Klang Valley. A group of 29 participants was interviewed based on their years of investment experience. The number of participants was guided by Creswell et al. (2007). Sufficient sample size is needed to address the complexity and subjectivity of this research. The Gioia method will be utilized to answer the research question presented earlier. Thorough explanations in the following section will provide an explicable overview of this study.

As per Chapter 3, this study seeks to establish a data structure that can indicate the attentiveness of the research applied in this qualitative paradigm-based research (Pratt, 2008). The distillation of information derived from participant quotes resulted in 59 first-order terms and 15 second-order themes. Finally, the emerging four aggregate dimensions will help make sense of the overall research. The researcher will rigorously explain the process and high thinking that transformed raw data into the final overarching theoretical concept in the following section. An in-depth discussion of all aggregate dimensions will be fully elaborated in Chapter 5.

4.2 Research Question 1: What is Rumor from the Perspective of Social Reality?

In this section, the present study clarified the meaning of rumor based on social reality. The study discusses social reality as seen through the eyes of the participants. From the standpoint of this study, "social reality" refers to Collin's (1997) detailed account of social reality. The author asserts that social reality is another way one forms one's conception. How we think or

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speak about social reality, our understanding of its nature, how we explain it to one another, and the concepts we employ to understand it all contribute in some way to how we see it. The author continued by stating that social facts are believed to be a by-product of the same cognition, the very intellectual processes via which they are cognized, interpreted, and categorized, particularly as this cognition is a shared and common process (Collin, 1997). Other than that, humans translate their thoughts into reality through action, or their ideas serve as patterns for things they proceed to make real through their actions. In this research, the researcher intends to investigate the process where rumor has been associated with participants' decision-making. Referring to the explanations from Collin (1997) above, a strong perspective of social reality can be found in participants' quotes during the interview sessions.

From a theoretical point of view, rumor is classified as something little known, particularly in the share market (Malkiel, 2003). The complexity of rumors associated with investors' decision-making makes it difficult to put into research. However, if the environment, such as the share market, lacks information or news, the rumor may be a booster in the source collection process (DiFonzo & Bordia, 2007). There is no strict line between rumor and information. The subjectivity element of rumor has drawn a divided line with information results from those who believe it. For example, Schindler (2007) explained that people would consider something as information if the outcome was true, and it would be called a rumor if the outcome was false. As per the data analysis, rumors comprise the conceptual structure and process of investors' decision-making. The following section explains how the participants interpret rumors from the perspective of investment decision-making based on social reality.

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4.2.1 Conceptualizing Rumor in Respect of Investors' Decision-making

The analysis of the raw data indicates that while the rumor is not inherently untrue, it lacks proof when it comes to investment decision-making. Word-of-mouth spreads rumors based on participants' justifications, and they offer 'knowledge' on a 'person, happening, or situation.' These forms somehow spontaneously appear from the participant's quote. Some examples of the quotes indicate that:

...you can hear market rumors everywhere. As an investor, I need all this so-called "info" for me to make decisions in my investment. Sometimes you can get it from the Internet, but mostly I hear it from my remisier. (Participant#6)

More specifically, a rumor based on social reality signifies that a phenomenon qualifies as social if it involves several human agents whose plans or actions are somehow connected. Since rumors are frequently spread verbally or online via social media platforms like Facebook or Instagram, the crucial question is always where the rumor originated. More intriguing is the unequivocal proof that retail investors overestimate their ability to identify a rumor's source. After hearing a rumor, retail investors in this study check it out among themselves and keep an eye on how the rumor's share price is changing. If the price changes, the rumor probably has some basis in truth. As a result, the research suggests that rumors spread because people believe them. Note that investors are already biased in favor of the rumor and will believe it to be true if they respond to it in the market by buying or selling. The sources of the rumor are the key factors contributing to belief and subsequent actions in the rumor.

This has also eliminated all the images of friends sharing rumors, either by telling stories to one another or in a series of phone calls. However, this is no longer sufficient to fully describe

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the significantly more intricate methods by which information flows in modern society. For example, with the click of a mouse and today's technology, a person with only basic computer abilities or browsing on a smartphone might spread rumors almost instantly, as the process has been transmitted to actions. Excerpts below support the findings.

...if you are talking about 10 years back, yes, it is true that people gossip and spread rumors in coffee shops. But look at now! Everyone using smartphones, even old uncle and aunty also know how to use FB and IG. Last time they needed the newspaper to get market info, now no more. (Participant#8)

Typically, rumors are formed from one person to another, and each time they are informed, it may vary slightly. They may eventually inflate and change as a result. Plus, rumors can be formed based on current events or situations of a company itself. The event may relate to the current situation in the country, the current situation in a company, or an individual. **Figure 4.1** illustrates the concept of forming rumors.

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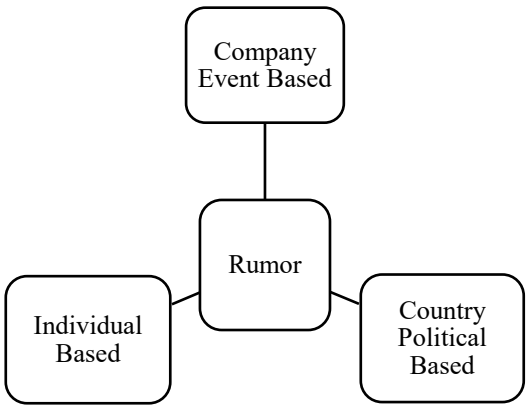

Figure 4.1

Concept Forming of Rumor

The first category of financial rumors is individually based, which includes small-scale interactions between people, including small-group dynamics or conversations. Inquiry levels, transmission, and influence are micro. Below is an example of the participants' quote:

... Apparently, when my friend who works in QL said Dr Chia (Chairman of QL Resources) would step down as the company's chairman, I quickly sell-off all QL's shares. And you know what happened next? QL share price tumble. (Participant#18)

The second is a company-based financial rumor. These are unsubstantiated claims that directly relate to certain companies' financial behavior. This includes, for example, rumors of mergers and acquisitions in the share market. For example, in the case in Chapter 1 on the merger of Digi and Axiata, the share price for both companies rocketed up after spreading rumors in the market. Data also present a similarity to the proposed concept. An example of a participant's quote is as below:

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...when news comes out, the market will react, people like us will start to buy, and the price will go up. During any M&A activities like Digi and Axiata, people from corporate finance is the one who gets involved. So, I can tell you they are the most highly suspected party bringing out all these rumors to the public. (Participant#9)

The final category of the financial rumor is dependent on developments in the political and economic sectors. Any number of occurrences in these domains could represent an instability risk that could have an impact on stock market trading activity, including speculation regarding government, particularly elections. An example of the participant's quote is as below:

...remember when PH won in PRU14? The market stays stagnant and only moves in a very flat mode. Why this happened if we compared it to previous GE results? This is because not many companies link to PH if you compare those companies link to the previous BN government. (Participant#26)

From the perspective of participants, the ability of these themes to depict the effective procedures by which rumor spread is arguably their most unsettling quality. Similar quotes were also discovered in the data analyzed (see **Appendix 10**). Other than that, retail investors become puzzled when it comes to making decisions in the share market. Thus, it provides them a helping hand in their decision-making.

4.3 Research Question 2: What Facilitate Rumors in Investment Decision-making?

Data indicates many mechanisms facilitate rumor. Apparently, data implied that there is a direct and indirect mechanism that facilitates the forces of spreading the rumor. Information is moving swiftly and in many different formats as a result of technological innovation. Currently, there are several well-known and active social media apps with millions or even billions of users, including WhatsApp, Facebook Messenger, Instagram, and Twitter. The Internet, which serves as a forum for free speech, has also developed into a channel for spreading numerous internet rumors and has even influenced the choices made by retail investors. Although conventional media has been categorized as slow, it still has some impact on spreading rumors. At times, people might think the conventional media finds it difficult to report the truth. Examples of participants' given quotes as below:

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...we have our own private Whatsapp group, and I will share the latest news I hear with them. Of course, I will filter it before I share it. I will be happy if they make money, but if they lose money because the news, I shared is not accurate, then I feel sorry. (Participant#2)

Interview participants have pointed out how they get sources of information like newspapers, television, and radio. Although this sounds like a very old school with a convenient way of transmitting information, they feel comfortable and still practice it. It makes no difference whether the channel is old or new. Hence, it can be identified as one of the channels where people can spread rumors and influence it.

...I have a smartphone, but I seldom use it; the newspaper is still my daily routine to get info. For me, a newspaper is more reliable. (Participant#10)

On the other hand, rumors can be transmitted directly, verbally, or orally. The spreading process normally comes from the top to the bottom and vice versa. It is believed to be the nature of people who spread rumors to provide wrong directions, especially in the share market. It depends on the investors themselves to value how reliable the rumor is. Some of the participants' quotes are as below:

...I am heavily relying on my remisier. Almost every day, I get 'tips' from him. He will share 'tips' (market rumor) to all his clients, including me, to buy a certain share with a target selling price. Well, sometimes I do lose money because of tips. (Participant#29)

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...my remisier ask me to buy company "A," but before I decide to buy, I will ask my ex-boss, who is a good friend to company "A" top management. This is my common practice before I make up my mind. (Participant#13)

The data above provides a structure that conceptualizes direct and indirect mechanisms that facilitate the spreading of rumor (see **Appendix 11**). **Figure 4.2** illustrates the concept.

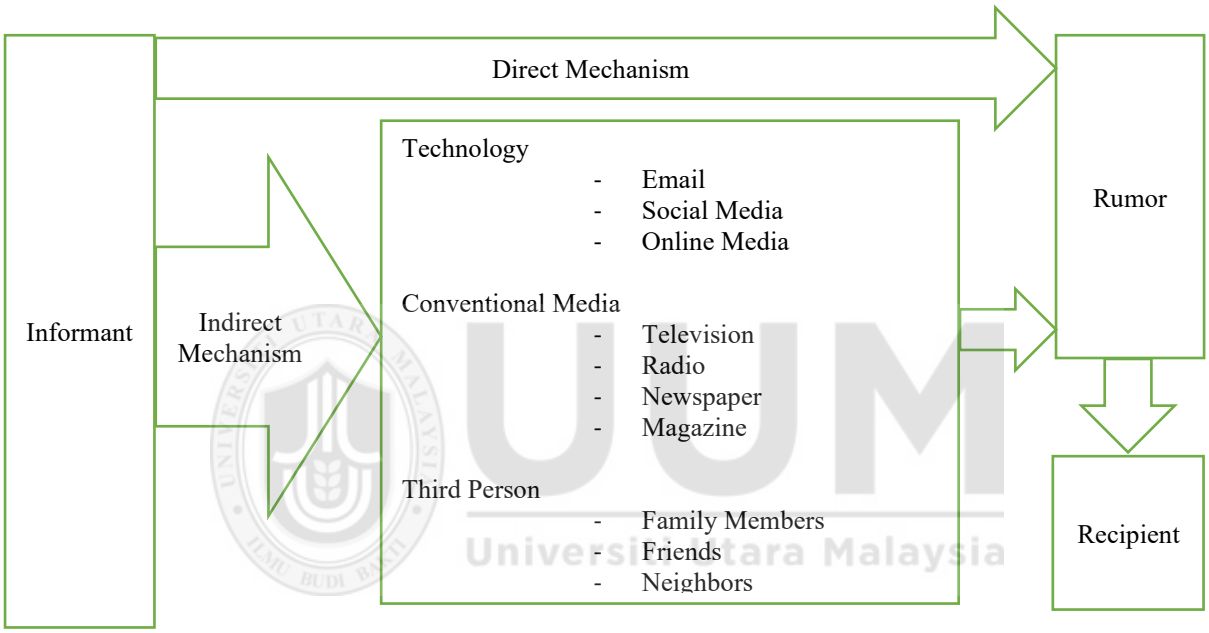

Figure 4.2

Concept of Direct and Indirect Mechanism Forces of Spreading Rumors

Based on the data, two mechanisms are formed in the transmission process of rumor. The first forming mechanism is the direct mechanism. It is the mean of transmission of rumor going in a straight line towards somewhere or someone without stopping or changing direction. The collective result is also rewarding for both parties when they communicate with each other. By spreading a rumor to another person, the rumor spreader could be attempting deception, seeking social acceptance for disclosing such significant knowledge and anticipating a future

reciprocation from the recipient. Note that most people do not have much information regarding emergency events at first. Hence, rumor-spreading was largely motivated by informants' ability to derive gratification from spreading rumors.

The second forming mechanism, called the indirect mechanism, utilizes intermediaries to transmit rumor. This requires the support of mechanisms, such as innovation and the application of technology, using channels, machinery, equipment, and human beings. The evolution of technology has enabled faster progress and spread, causing an acceleration in the transmission of rumors. Here, the content of these intermediaries molds the process. It governs investor decision-making and could bring a change in investment outcomes.

i. Technology: Uses of new technology such as email, social media, and online media have had a high impact on the transmission of rumors nowadays. Advancements in technology have a very profound effect on the process of decision-making. Based on the data, interview participants were aware of rumors in the shares market from new technology, such as WhatsApp, Facebook, and Instagram.

ii. Conventional Media: Another mechanism to transmit rumor very efficiently is via conventional media. This includes printed materials, such as newspapers, business magazines, television, and radio. Most older participants admit that they learn about rumors in the shares market from printed material and business news broadcast on television.

iii. Third Person: This group of people is very active in the conflict and interested in developing the transmission of rumors. It is important for these 'rumor spreaders' to transmit rumors to people in their constituency group widely. Thus, the process of investment decision-making happens. Almost all the participants had experienced

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hearing rumors in the third person, which led them to their investment decision-making process.

4.4 Research Question 3: How Rumors are Associated with Retail Investors' Investment Decision-making?

In this section, the researcher explained the process of how rumor is associated with investor decision-making to buy or sell. This is due to the emergence of themes from the data analysis. The finding of the process of how rumor is associated with investors' decision-making to buy or sell may be a piece of the puzzle in the source of contribution for this research.

4.5 Rumor and Investors' Decision-making

As per the data analysis, the researcher managed to segregate and group the variables into four major dimensions: anticipated outcome, subjective probability, external factors, and fundamental principles. The emergence of these dimensions is the result of four processes in different situations. Subsequently, the following section deliberates on how each process of rumors is associated with decision-making.

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4.5.1 Anticipated Outcome

Five themes emerged from **Situation 1** that described the anticipated outcome process of how rumors are associated with the investment decision-making processes, which are 1) environment sensitivity, 2) investment strategy, 3) investment knowledge, 4) social approach, and 5) situation attention. Based on the process, the five themes mentioned above emerged, indicating how rumors are associated with investors' decision-making. According to participant data, the anticipated outcome has a strong association meaning in investors' decision-making processes. The anticipated outcome for an individual is learning or discovering something of

themselves for a purpose. Hence, the finding of this attribute can be refined and explained to retail investors in how they make their investment decisions.

4.5.1.1 Environment Sensitivity – Anticipated Outcome

To further understand the process of rumor associated with decision-making, an important commonality was established among participants that highlighted the importance of rumor in their investment decision-making. In addition, sensitivity to the source of the rumor they are dealing with helped them make a better judgment. **Table 4.1** explains the categorical analysis of first-order terms to support the second-order themes' development and aggregate dimension.

Table 4.1 Data Structure

First-order-terms to second-order-themes for "Environment Sensitivity"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Measure of a financial value reaction to changes in underlying factors. This action helps participants isolate risk, hedge risk, and explain profit & loss	Environment Sensitivity	Anticipated Outcome
Basis actions that participant seeks for some investment recommendations towards their investment		
The magnitude of participant's reaction to changes in underlying factors, most often in terms of response to the process of decision making		

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...when I hear any rumor, I will carefully investigate the company's cash flow and avoid any high gearing. From there, I can know whether the company is serious about doing business; in other words, it is a good bargain for your investment. (Participant#2)

Term 1 (to buy): Assess a financial value's response to changes in underlying factors. This action helps participants hedge risk, explain profit and loss, and isolate risk.

...he is so long active in the shares market, and I believe, with his experience, his recommendations will help toward the winning side. Almost all my investment portfolio is from his recommendations. (Participant#3)

Term 2 (to buy): Based on these actions, the participant seeks some investment recommendations.

...when the news comes to me, I will look at it. If the company conceives with my investment agenda, certainly, I will pay more attention to it. Yes, most probably I will buy it. But if the company's business directions are against my principle, I will ignore them. (Participant#16)

Term 3 (to buy): The magnitude of the participant's reaction to changes in underlying factors, most often in terms of response to the process of decision-making.

From the above explanation, participants demonstrated an environmental sensitivity process in identifying the source of rumor towards any actions. Retail investors should have more sensitivity to their investment environment to choose the best possible strategy to maximize

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their potential gain compared to their potential loss. Thus, applying this process helps participants to be better positioned in their investment decision-making.

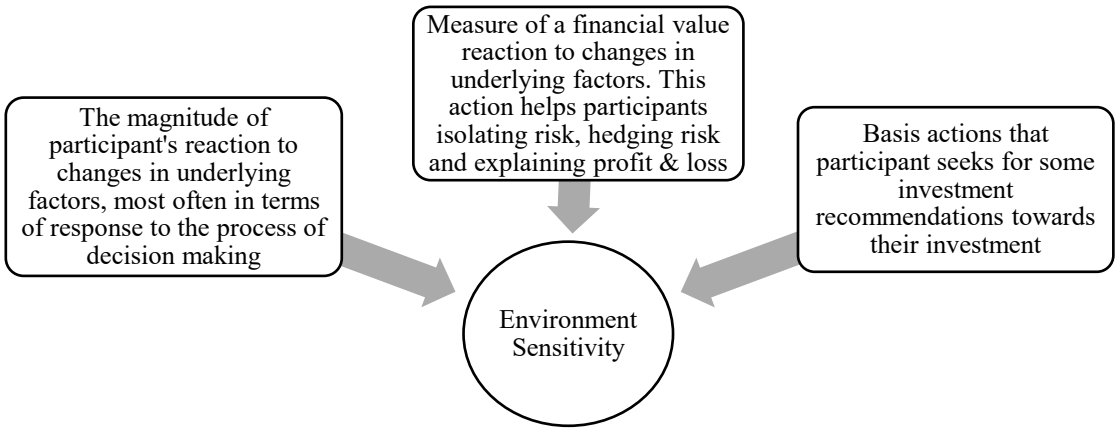

Figure 4.3

Coding Process for Theme 1

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4.5.1.2 Investment Strategy – Anticipated Outcome

As per consolidated information from participants, investment strategy refers to this research as "a set of principles designed to help an investor achieve their financial and investment goals." From the data, participants were stressed when they heard rumors about how they strategized their investment strategies based on the objectives and goals they desired to attain.

Table 4.2 Data Structure

First-order-terms to second-order-themes for "Investment Strategy"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Set of goals that determine participant's financial portfolio	Investment Strategy	Anticipated Outcome
An objective that is set by the participant and typically is set to mature at a future time		

Participants have knowledge of, are conscious of, or have a perception of an event and are very aware of circumstances		
Actions about possible investment risks that are not justified by the facts at hand		
Degree of participant's willingness to endure within their portfolio		

...I will target industries poised to grow for the next 5-10 years, such as technology stocks and digital banking. I heard that Bank Negara is going to announce which company is going to get its digital banking license soon. So, it is time to buy those companies' shares. (Participant#25)

Term 1 (to buy): Set goals that determine the participant's financial portfolio.

...I really like Real Estate Investment Trusts (REITs), but not REITs in Malaysia. REITs in Malaysia do not have clear investment directions. My focus is on REITs in Singapore. It is more specific and professional. I noticed a digital paper saying that REITs in Malaysia are going to have a hard time in the coming 2-3 years. So, it is time to clear my positions. (Participant#2)

Term 2 (to sell): An objective is something that is set by the participant and is usually set to mature in the future.

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...they talk about 10 years circle of the financial crisis. 1997 Asian Financial Crisis, 2008 Financial Crisis, and 2020 COVID-19. I think it is better I sell off all my shares before it happens again. (Participant#22)

Term 3 (to sell): Participants have knowledge of, are conscious of, or have a perception of an event and are very aware of circumstances.

...last time when I got to know, I will straight buy, never bother about any risk that I would face. But this time, my investment strategy has totally changed, totally different from the previous strategy. I started to build interest in those shares I was interested in, and I will carefully analyze all the news before I buy. (Participant#15)

Term 4 (to buy): Actions about possible investment risks are not supported by the available information.

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...because of my profession, I am more into numbers rather than charting, and I will do fundamental checking. There is no shortcut in my decision-making. If any market news comes to me, I will carefully check their balance sheet and company background before I enter the market. (Participant#2)

Term 5 (to buy): Degree of the participant's willingness to endure within their portfolio.

The above explanations indicate that the participant views data, especially on investment strategy, as a vital element in their investment decision-making. Note that investment plans are

an in-built thought process that helps sharpen participants' decision-making as they can compute and decide quickly.

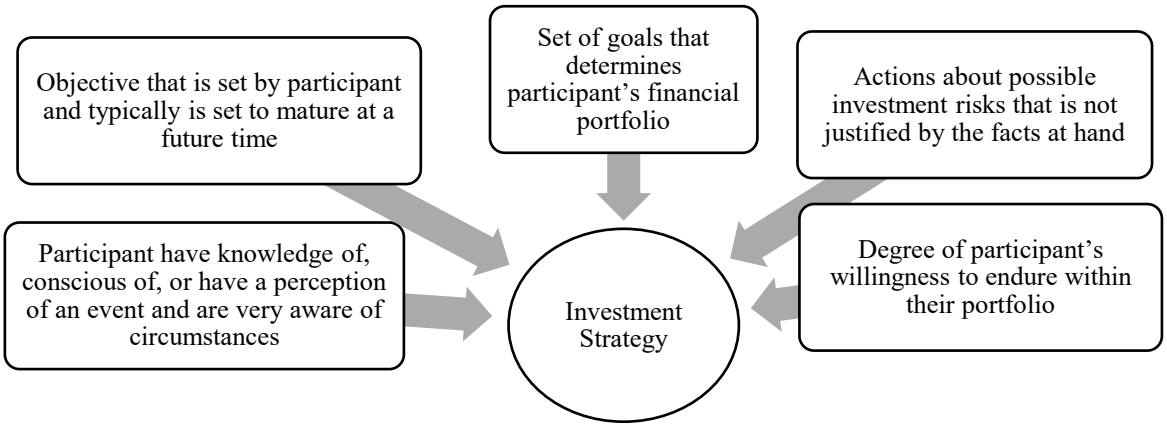

Figure 4.4

Coding Process for Theme 2

4.5.1.3 Investment Knowledge – Anticipated Outcome

According to consolidated information from participants' words, rumor can distract their investment decision if they lack sufficient investment knowledge. Examples of participant quotes present that investment knowledge is essential to their decision-making process.

Table 4.3 Data Structure

First-order-terms to second-order-themes for "Investment Knowledge"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Participants use this as guidelines to govern their behavior in a way that allows them to remain faithful to the tenets of their investment philosophy. Decided to do an accumulation process by	Investment Knowledge	Anticipated Outcome

averaging up the prices of all the shares purchases.		
Process of determining the most efficient investment strategy for participants to maximize their investment profit.		
The urge of participant decision-making process change as they progress through different stages and time.		

...previously, I invested blindly, I did not have any investment knowledge at all, and I traded based on "tips." As a result, I lost a lot of money. When I turn in my 40s, I make a comeback. But this time, I am more ready for my investment purposes. I learned a lot about investment. At least I will study the company before I buy. I think this is important for me to make my decision. (Participant#18)

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Term 1 (to buy): Participants use these as guidelines to govern their behavior in a way that allows them to remain faithful to the tenets of their investment philosophy.

...all my investment is from my hard earn money, and I know I should make the best decision in every move I make. I know my investment cannot last long if I solely depend on rumor. So, for now, before I buy shares, I will spend a lot of time to study on the market. When the share price drop, I will buy some to average back my initial purchases. (Participant#10)

Term 2 (to buy): Decided to accumulate shares by averaging their prices.

... expert always tells you their thoughts plus some suggestions to sell when the time has come; how accurate it is, we never know. To be more responsible for your own investment, you need to allocate time to study more on the market. Learning is a long journey, and it is time-consuming. All these processes you need to go through. (Participant#26)

Term 3 (to sell): The process of determining the most efficient investment strategy for the participant to maximize their investment profit.

...do not believe those rumor in blogs; they talk nonsense. It depends on how you look at it. For me, blogs are a place for entertainment. If you are serious, you will get burned. I get burned a few times because of blogs. There have been a few trading classes in town recently, especially during MCO when everybody cannot go out. Believe me; it is going to be more people getting burned. (Participant#24)

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Term 4 (to buy): Urge participants' decision-making processes to change as they progress through different stages and over time.

Although most of the participants in this research are well educated, 90% of them agree that anyone who intends to immerse themselves in shares investment at least needs to have investment knowledge. However, if you add a little consciousness to it, the investor will see its essence. Whatever method investors use to learn, it may be a good idea to start by becoming aware of their limited ability to detect rumors in their investments.

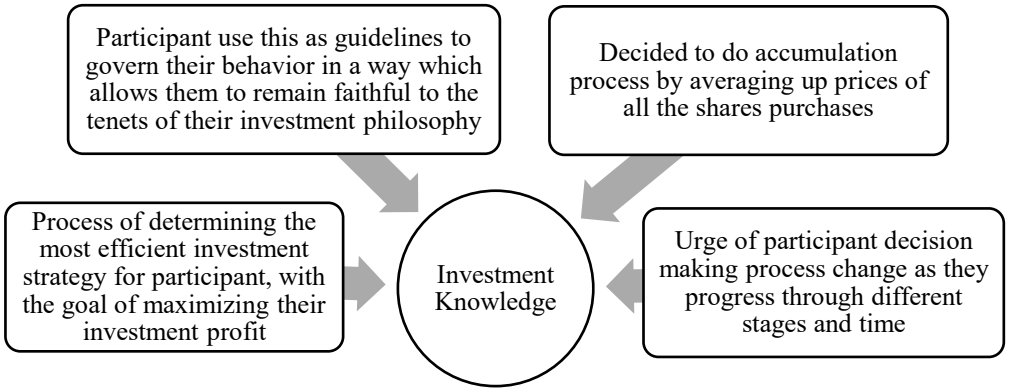

Figure 4.5

Coding Process for Theme 3

4.5.1.4 Social Approach – Anticipated Outcome

Participants also mentioned that understanding the process was a key component in enabling them to improve their decisions. Participants consider the social approach a successful influencing outcome in their investment activities. This includes suggestions or opinions from experts and professionals in the industry.

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Table 4.4 Data Structure

First-order-terms to second-order-themes for "Social Approach"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Uncertain opinion or a lack of confidence that might lead to adverse outcome	Social Approach	Anticipated Outcome
Alternative values from experts to guide participants in making decisions		
Helps to ensure the right criteria are identified and defined with all appropriate alternatives are considered		

Older investors make more conservative investment decisions, and their decisions reflect greater knowledge about investing		

...I am heavily relying on my remisier. Almost every day, I get "tips" (market rumor) from him. He will share "tips" with all his clients, including me, to buy certain shares with a target selling price. Well, sometimes, I do lose money because of "tips." The moral of my story is to not 100% rely on the rumor (Participant#29)

Term 1 (to buy): Uncertain of opinion or a lack of confidence might lead to an adverse outcome.

...when an expert says he gets the news from his associates that company "A" is good and shares price will go up, then I will choose to believe and buy. The longer time I think, the longer I suffer the dilemma. But believe me, not all expert is true-hearted in the share market. (Participant#28)

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Term 2 (to buy): Alternative values from experts to guide participants in making decisions.

...look at the indicator; it will help you a lot. A company needs to make their financial announcement every quarter. When you hear anything negative about the company's financial results, that is time for you to get off the market. I take all these considerations before I sell off. (Participant#17)

Term 3 (to sell): Helps to ensure the right criteria are identified and defined with all appropriate alternatives considered.

...I am 61 years old and still in the learning process of trading shares. Do not limit yourself and make excuses because of your age. If you want to know something, you must learn how to get the answer. Always ask people around you if you want to know. But do not just listen to people without checking the source. Refer to the newspaper at least to confirm before you buy any shares. (Participant#10)

Term 4 (to buy): Older investors make more conservative investment decisions, and their decisions reflect greater knowledge about investing.

In demonstrating social approach attributes, participants demonstrated prioritizing looking for advice from someone they trust. Based on the data, participants often pointed out parties like friends and family members, and some also mentioned their associates, which contributed to their decision-making process.

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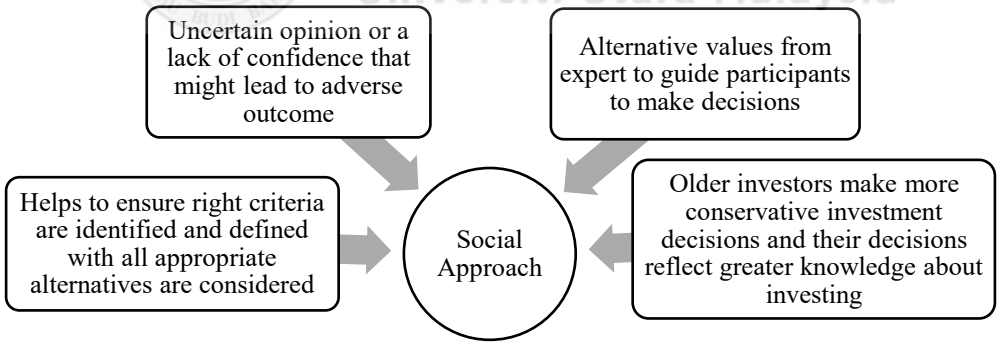

Figure 4.6

Coding Process for Theme 4

4.5.1.5 Situation Attention – Anticipated Outcome

Another key aspect of rumors associated with investor decision-making is offering attention to spreading rumors. It identifies the advantages of investment and the risks it is likely to face in

uncertain situations. Participants also established that they are keen to take any opportunity in these conditions that can make them think and decide differently.

Table 4.5 Data Structure

First-order-terms to second-order-themes for "Situation Attention"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Asking for peers' opinions to share experiences that can build concrete decisions	Situation Attention	Anticipated Outcome
Leverage on events or situations that are unusual or may have had an impact on the shares market		
Style of trading that attempts to capture short-to medium-term gains in the shares market		
Grab any possibilities that participants can take advantage of		

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...when my remisier asks me to buy shares from his recommendations, I will ask my ex-boss first. He usually will give his comment before we come to conclusions, is it the right timing to buy or not. (Participant#13)

Term 1 (to buy): Asking for peers' opinions to share experiences that can lead to concrete decisions.

...lockdown is the most wonderful time to shop, my friend. All shares drop to rock bottom. That is the only place you can grow your investment portfolio. I hear a lot of noises when in lockdown, but I never bother, just follow my instinct to buy shares. (Participant#14)

Term 2 (to buy): Leverage on events or situations that are unusual or may have had an impact on the shares market.

...I can enter and exit the market in a very short time period. Sometimes I do as many as 30 transactions per day; it does not matter. Sometimes you hear as many as 3-4 rumors at the same time; sometimes, you cannot hear anything. (Participant#18)

Term 3 (to sell): A method of trading shares that aims to profit from gains throughout the short- to medium-term.

...is my call, my own decision. When I feel like I want to sell it off, I will do so. Whenever I feel like I want to come back, I will make a comeback. (Participant# 26)

Term 4 (to sell): Grab any possibilities that participants can take advantage of.

Based on the data, the participant who hoped to make their investment decisions well should exhibit a high level of knowledge and precise perceptions. Here, the analysis process occurred, especially because participants faced uncertain situations.

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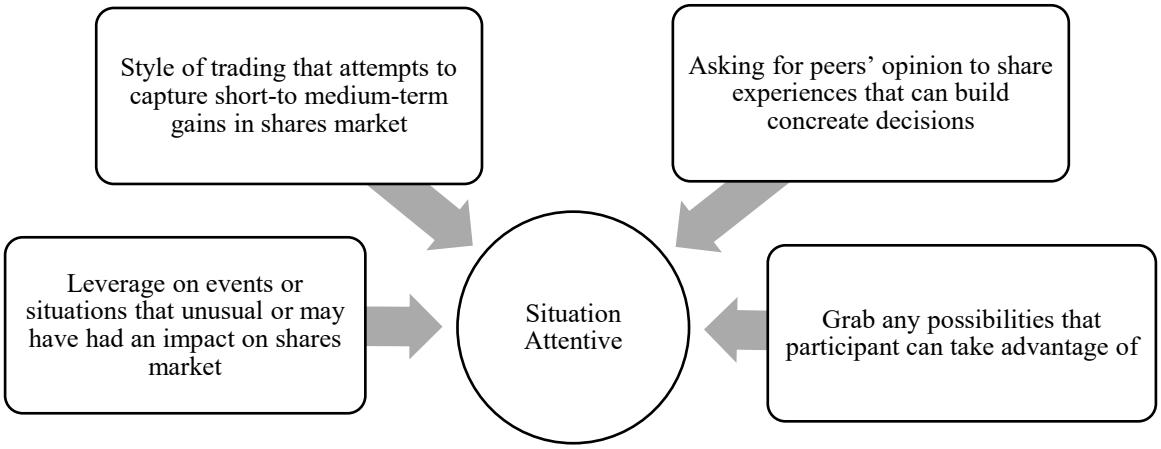

Figure 4.7

Coding Process for Theme 5

4.5.2 Subjective Probability

Four themes emerged from **Situation 2** that described the subjective probability process of how rumor associates with the investment decision-making process; there are 1) investment attributes, 2) investor character, 3) investor emotion, and 4) investor behavior. The four themes mentioned above emerged from the analysis process, indicating the attributes of how rumor is associated with investors' decision-making. Furthermore, data from participants indicates that terms like "emotion" and "behavior" with this attribute. It was apparent that investors are committed in making investment decisions when they encounter rumors.

4.5.2.1 Investor Attributes – Subjective Probability

To understand more about the process of the participant's action, the researcher typically investigates investor attributes, including their patience, focus, and sufficient due diligence in researching for greater investment outcomes.

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Table 4.6 Data Structure

First-order-terms to second-order-themes for "Investor Attributes"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Bias occurs when a participant in the selection process	Investor Attributes	Subjective Probability
Stubbornly holding to one's own opinion		
Participants able to demonstrate strong self-discipline in action		
Ability to recognize what is the most comfortable position and not react against or beyond boundaries		

...my investment criteria, as I shared with you before: dividend yield, consistent growth, not relying on any ad-hoc factors, or political involvement. If I find any rumor that those companies meet the criteria, I will buy it. But if it does not meet the criteria, I will ignore it. (Participant#29)

Term 1 (to buy): When a participant is involved in the selection process, bias occurs.

...I am the kind of person who is not easy to get influence by any situation. You may share news or rumors with me, but my stand is very firm. My ideology in investment solely relies on my own decision. (Participant#6)

Term 2 (to buy): Stubbornly holding to one's own opinion.

...if you do not perform due diligence when you buy shares, your investment could be at high risk. What is the point if you do investment just based on rumors? I will never do that. Before I make any investments, I always do my own checking to make sure my investment will be a wise one. (Participant#3)

Term 3 (to but): Participants can demonstrate strong self-discipline in action.

...I cannot take high risks. The share market, for me, is a place to invest, not to gamble. You must have your own target and limit. Do not get distracted by any market rumors out there. Yes, of course, I buy some if I hear rumor related to the blue-chips company. (Participant#19)

Term 4 (to buy): Ability to recognize what is the most comfortable position and not react against or beyond boundaries.

From the data analyzed, the investor attribute has a dominant position over the participant attribute when making appropriate decisions. It is significant because it establishes a competitive economy and encourages all members to work hard to maximize their gains. This is where a rumor's filtering and prevention process is when it comes to investor decision-making. Other than that, investors can refresh their opinions and put their convictions to the test by actively contrasting and comparing ideas with clarity of mind.

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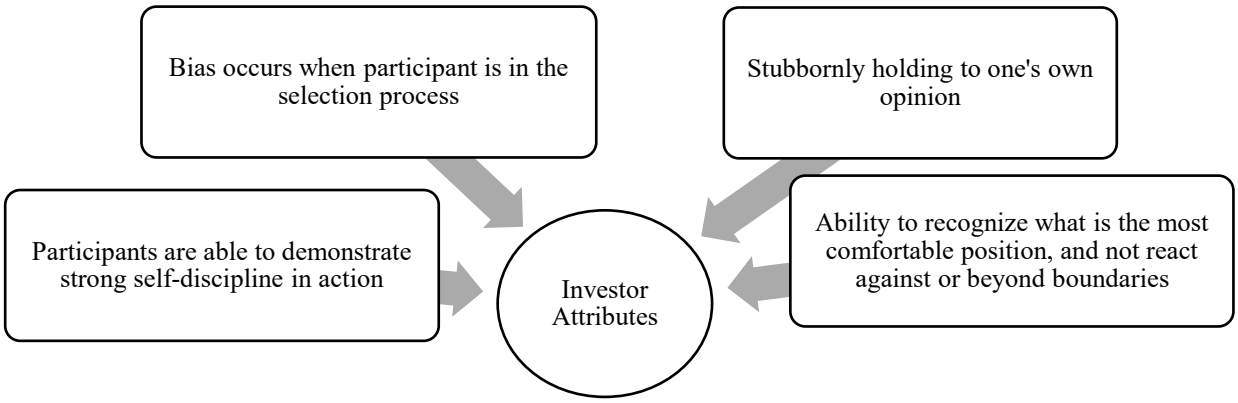

Figure 4.8

Coding Process for Theme 6

4.5.2.2 Investor Character – Subjective Probability

Based on the data, participants can demonstrate strong practical and functional choices or decision-making based on their wisdom or prudence. The process of making decisions is more likely to be beneficial to their outcome.

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Table 4.7 Data Structure

First-order-terms to second-order-themes for "Investor Character"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Demonstrate passive and evidence-based investing, which seek to influence factors to make decision	Investor Character	Subjective Probability
Setting the applicable framework as the golden rule in investment		
Provide the opportunity for the participant to take control of his investment		
Patience and discipline are a virtue that will benefit participant		

Knowing how to prioritize the preservation of capital over market returns		

...he contacted me daily, and I know that it is his job to update the market of his client. I prefer to hear about US market conditions because for me Asia market is highly influenced by the US market. If the US market goes down, normally, I will sell off my shares when our market opens. (Participant#27)

Term 1 (to sell): Demonstrate passive and evidence-based investing, which seeks an influencing factor to decide.

...I have loved numbers since I was young. This has led me to become an accountant when I grow up. Numbers have patterns, and patterns fascinate people. I think, therefore, I do not believe in rumor so much. It is a big NO for me to buy based on rumor. (Participant#2)

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Term 2 (to buy): Setting the applicable framework as the golden rule in investment.

...I put my money in a few blocks, FD (fixed deposit), mutual fund, expenses, and mutual funds. But if you want to enlarge your investment portfolio example, trading in "speculative" shares, you need additional funds to make it happen. So, by the time I hear something in the shares market, I am already there to make my move. (Participant#24)

Term 3 (to buy): Provide the opportunity for the participant to take control of his investment.

...not every day is a good day; you need to wait for the right timing. If I miss out, I will look for other companies in the same sector. Normally the movement of the share price will influence other companies in the same sector. Still, I will buy, just wait for the right time. (Participant#11)

Term 4 (to buy): Patience and discipline are virtues that will benefit the participant.

...there is nothing that can shake my mind; no matter how attractive the news is, I would not border it. I cannot take any risk and only look for stable companies to guarantee a return on my investment. (Participant#23)

Term 5 (to buy): Knowing how to prioritize the preservation of capital over market returns.

From the data, participants' reactions to rumors are formed based on their personal character. Participants can show how they think, feel, and behave and translate it into actions.

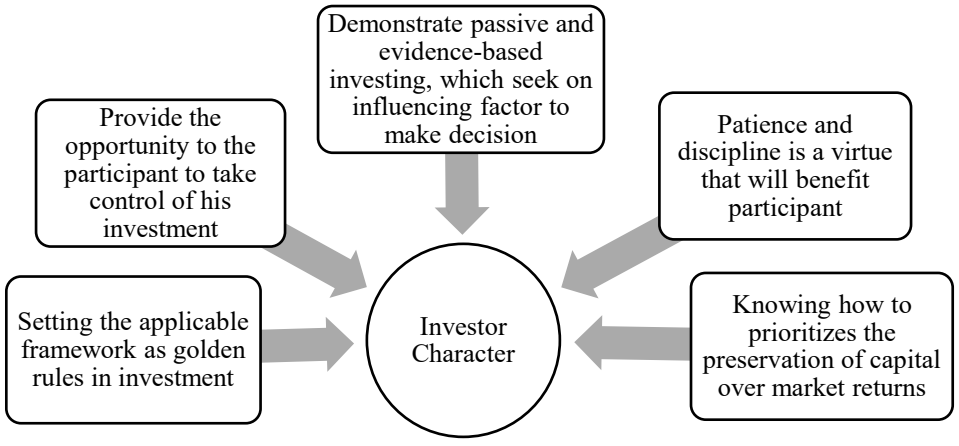

Figure 4.9

Coding Process for Theme 7

4.5.2.3 Investor Emotion – Subjective Probability

Emotions investment occurs when participants focus their emotions, in the form of their thoughts, feelings, and behaviors, on anything that they hope over time will help them grow and sustain their emotional decision-making. According to the data, it appears to occur spontaneously from participant quotes when they gave their thoughts when rumor entered their investment decision-making.

Table 4.8 Data Structure

First-order-terms to second-order-themes for "Investor Emotion"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Acting from participants that led them to make sub-optimal decisions and undermine their decision in the shares market	Investor Emotion	Subjective Probability
Participants demonstrate the capacity to engage in interdependence with a sense of safety and wholeness that can be damaged		
One party in a set of the process has a direct influence on another party		
The willingness of participants to respond fearlessly despite the anxiety		
Expressing very happy and pride because of such an achievement		

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...no time for you to think much when market rumors come to you. Anything, just buys first, and figure it out later. I need to find sufficient funds to settle my shares purchase on the final day. If not, I might be in big trouble as the investment bank will force sell my shares. (Participant#24)

Term 1 (to sell): Acting from the participant that led them to make sub-optimal decisions and undermine their decision in the shares market.

...I believe everyone has their own way. No matter how attractive the news is, I do not easily buy shares if I don't feel good about that company. My instinct usually will give a signal to me when to sell and not to hold anymore. So far, I feel good about my instinct. (Participant#18)

Term 2 (to sell): Participants demonstrate the capacity to engage in interdependence with a sense of safety and wholeness that can be damaged.

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...why so headache? I can just follow his recommendations. You are not an expert, but they are. So, just listen to the expert. My trading account has been under him for years. I trusted him. When he says buy, I will buy. (Participant#12)

Term 3 (to buy): One party in the process has a direct influence on another party.

...that is the darkest moment in my life. I sold all my properties to cover losses. It took years for me to recover. When I look back, I can see how stupid I am to trade shares based on the remisier's recommendations. I will not trust him anymore. (Participant#19)

Term 4 (to buy): Participants' willingness to respond fearlessly despite their anxiety.

...we have not seen such a liquid market for quite some time. In the past few years, we could hardly make fast and good profits within a short period of time as the sentiment was not good. This is the right time to go into the market; I buy a lot of shares and am happy with my current portfolio positions. (Participant#26)

Term 5 (to buy): Expressing happiness and pride in such an achievement.

Typically, participants invest their hard-earned money with the hope of making a return. Still, occasionally, market events cause their investments to lose value. The losses may result in unforeseen disasters in their lives, stress, and disappointment. Based on the data, most participants' goal in investment is to achieve maximum investment outcomes.

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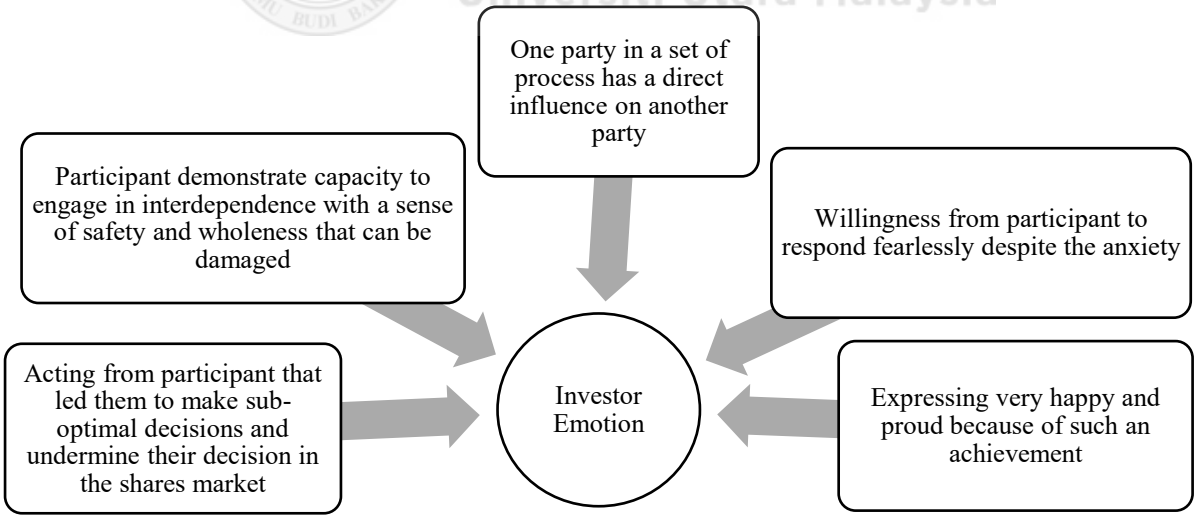

Figure 4.10

Coding Process for Theme 8

4.5.2.4 Investor Behavior – Subjective Probability

Rumors can influence participants' investment decisions based on data from participants. The participant also stressed how they react and behave when they hear rumors.

Table 4.9 Data Structure

First-order-terms to second-order-themes for "Investor Behavior."

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Able to show essential quality determining intrinsic nature behavior	Investor Behavior	Subjective Probability
Experiencing behavioral response that is greater than normal		
Participants demonstrate self-control to restrain their desires and impulses		
Ability to tune in to participant's feelings, thoughts, and actions		

...remember what Warren Buffet said: "don't put all your eggs in one basket"? Investing in different portfolios can help protect against significant losses. Your wish list might be a lot, but not all companies you should invest in. I doubt you cannot afford to fulfil all your wish list. So far, by following his recommendations, my investment return has been quite steady. (Participant#28)

Term 1 (to buy): Able to show essential quality determining intrinsic nature behavior.

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...from where do you think all these company rumors come from? It must be from a reliable source or person. It is not often we can hear news from these companies. So, buy their company's shares before others hear it. Of course, I do so. If it does not have any impact, you just sell it off. (Participant#29)

Term 2 (to sell): Experiencing a behavioral response that is greater than normal.

... If I follow his suggestion, it is not so difficult to earn 5% to 10% profit. I will sell off when I make 8% to 10% gains. Once the shares drop more than 5%, I will just sell off and cut losses. (Participant#12)

Term 3 (to sell): Participants demonstrate self-control to restrain their desires and impulses.

...I think we cannot avoid the possibility of a market crash again, but if you focus on shares with high liquidity, it will be easier to sell. Even though rumor says so, you must get yourself ready in any circumstances. (Participant#22)

Term 4 (to sell): Ability to tune in to the participant's feelings, thoughts, and actions.

Based on the data, participants have demonstrated behavioral action in their decision-making. Additionally, participants must control the irrational behavioral urges of emotional buying and selling that can result from tracking the ups and downs of the market.

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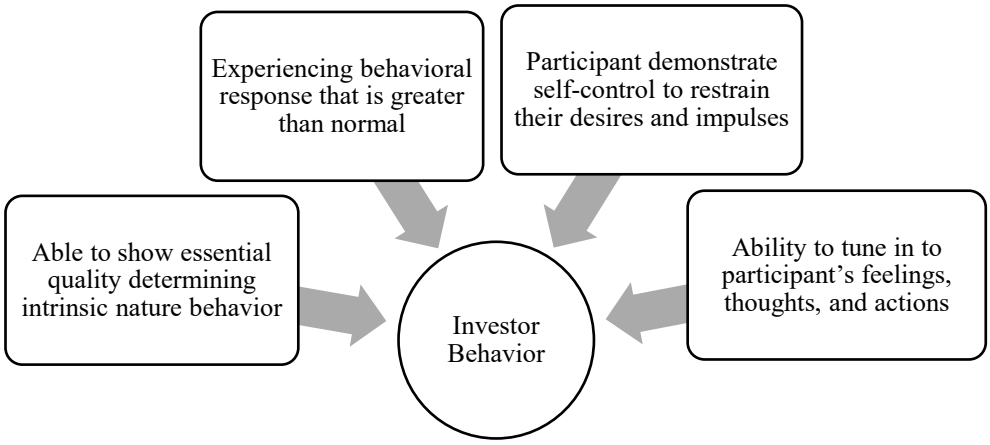

Figure 4.11

Coding Process for Theme 9

4.5.3 External Factors

Three themes emerged from **Situation 3** that described how external factors are associated with the process of rumor and the investment decision. Three themes are 1) influences of external parties, 2) the evolution of social technology, and 3) social relevance. From the analysis process, the three themes mentioned above emerged, indicating the attributes of how rumors are associated with investors' decision-making. Other than that, participants' data indicates that terms like "evolution of technology" and "market sentiment" are associated with this attribute.

4.5.3.1 Influences of External Parties – External Factors

According to the participants, this is one of the common channels through which a rumor can play a role in influencing investors' decision-making. In addition, a participant mentioned rumors could be external parties like domestic economic factors, political stability, and technology had influenced their investment decision-making.

Table 4.10 Data Structure

First-order-terms to second-order-themes for "Influences of External Parties"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Participants were able to identify the correct macro and micro economic forecast	Influences from External Parties	External Factors
Determinant value of information by its importance to the decision maker		
Participants demonstrate acts or results of apprehending the inner nature of things		
Leveraging on the evolution of technology for faster decisions and actions		

...It takes a short time for the foreign market to rebound, and it happens the same way to our share market. The US market rebounded not even in one week after a sharp fall in March 2021. This has had a huge impact on our share market. They even say on TV that the market is going to be better this year. This has given me huge confidence in our market. For sure, I will wait for that to sell my shares. (Participant#5)

Term 1 (to sell): Participants were able to identify the correct macro and micro-economic forecast.

...thanks to his "tips" (market rumor), ask me to buy companies that are related to crude palm oil (CPO). Raises in CPO price help me to make more than 20% profit gain on average, mainly from oil and gas companies. (Participant#6)

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Term 2 (to sell): The determinant value of information is its importance to the decision-maker.

... Company needs to spread rumor to attract investors' attention, and the investor needs rumor for trading. They need each other, and I do not think it will raise any ethical issues. Some more; after I sell off, there will be no more issues, right? (Participant#27)

Term 3 (to sell): Participants demonstrate the act or result of apprehending the inner nature of things.

...If you are talking about 10 years back, yes, it is true people gossip and spread rumors in the coffee shop. Although the power of spreading rumor is limited, they still can actively trade. Now everything has changed; everyone is using a smartphone, and even old uncle and aunty also know how to use the smartphone to trade. Same to me, I buy shares using a smartphone nowadays. (Participant#8)

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Term 4 (to buy): Leveraging the evolution of technology for faster decisions and actions.

In summary, the shares market is highly dependent on external parties for the creation of interest among participants in their shares trading. Different participants depend in different ways on their decision-making. As per the data analysis, from the participant's perspective, external parties' influences have impacted their investment decision-making.

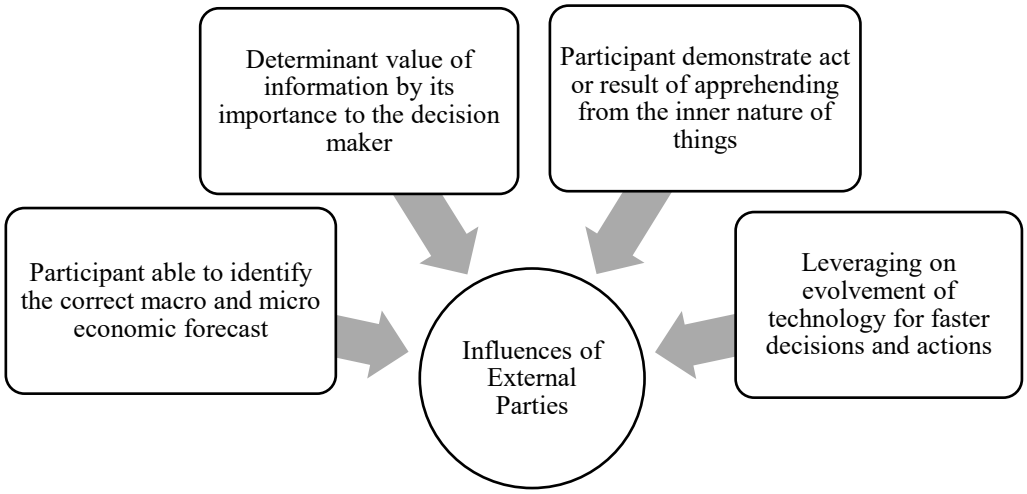

Figure 4.12

Coding Process for Theme 10

4.5.3.2 Evolution of Social Technology – External Factors

According to the participants, involvement in social and technological activities has greatly contributed to their decision-making process. This is needed when they look for confirmation on certain rumors or news. From the data analyzed, participants repeatedly mentioned "reference" as an important thing in their investment decision-making.

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Table 4.11 Data Structure

First-order-terms to second-order-themes for "Evolution of Social Technology"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Able to gather useful information from reliable channels to make decisions	Evolution of Social Technology	External Factors
Able to access reliable platforms to allow self-educate and decisions		
Able to grab opportunities from technological interventions		

Able to identify the greatest decision in the shorter time		

...you must look for a high-credibility source. Listen to Bloomberg and CNBC, or refer to The Edge for local and Singapore market news. Do not refer to blogs and news posted on social media. That is a must for me before I buy. I have been fooled by their recommendations before; enough for me. (Participant#29)

Term 1 (to buy): Able to gather useful information from reliable channels to make decisions.

...now you have webinars, online classes to teach you about shares trading, also classes for technical charting. Although it is not cheap, there are a lot of people who go to join these classes. But for me, this is the platform they try to lobby for certain companies. Normally, I would not buy on their recommendations. (Participant#23)

Term 2 (to buy): Able to access a reliable platform to allow self-education and decision-making.

...in the 80s and 90s, you get news from your friends, newspaper, or business magazine. By the time you noticed, the share price had already moved. Now it is different; I can get all news from my smartphone. I even can sell my shares on the spot. (Participant#20)

Term 3 (to sell): Able to grab opportunities from technological interventions.

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...market sentiment changes every second in the share market. Traders like me need market rumor to do trading; we need transaction volume. Transactions in the share market need to become faster. If the buy interest is higher than sell, the market will go up, and I cannot let go of this kind of opportunity. This is what traders want, I suppose? (Particpant#24)

Term 4 (to buy): Able to identify the greatest decision in the shortest time.

In summary of the above data, the presence of technology has changed the whole ecosystem of participants' share market activities. In addition, the transmission of rumors has also changed because of technological advancement.

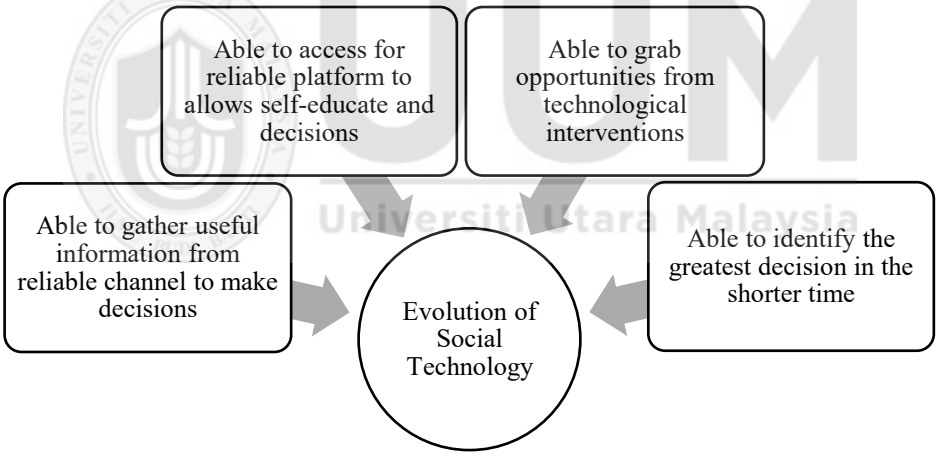

Figure 4.13

Coding Process for Theme 11

4.5.3.3 Social Relevance – External Factors

Based on the data, the participants pointed out actions relevant in a certain context related to things other than themselves, people, and a particular society. They demonstrate an interest relevant to the situation, which is reflected in their investment decision-making.

Table 4.12 Data Structure

First-order-terms to second-order-themes for "Social Relevance"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Participant's actions that they take in support of their decision making	Social Relevance	External Factors
Demonstrate personal beliefs and thoughts lead to actions		
Able to identify sources and strategies involved in making decisions		

...she says the longer the time to turn rumor into news, the lower her desire she wants to invest. I will not act so fast after like what she does. I need to check it properly. Sometimes I buy, but sometimes it end-up I did not purchase anything. (Participant#12)

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Term 1 (to buy): Participants' actions that they take in support of their decision-making.

...shares price move because of trading activities. The market movement relies on many factors; politics, economics, society, and technology. All of these can affect overall market sentiment and will give impact my decisions. That is why in the share market, when you hear something good or bad, you must act accordingly. If the sentiment is good, I will buy. (Participant#13)

Term 2 (to buy): Demonstrate personal beliefs and thoughts that lead to actions.

...do you know when your best entry point is? Do you have your decision before entering? Even if you do, you cannot get the price you want when the market is so volatile. You need sufficient info or news; it does not matter whether it is useful or not. Only sufficient information from the market can help you. When I have all the confirmations, then only I buy. (Participant#14)

Term 3 (to buy): Able to identify sources and strategies involved in making decisions.

According to the data, it seems participants are more readily applicable to such decision-making instances. The key feature of their actions is the idea that relevance is related to instinct, timing, and actions.

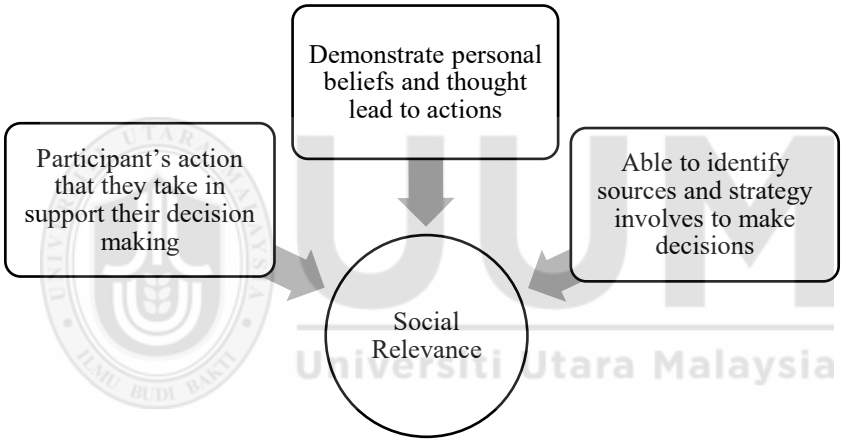

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Figure 4.14

Coding Process for Theme 12

4.5.4 Fundamental Principles

Finally, three themes emerged from **Situation 4** that described how fundamental principles are associated with the process of rumors and investment decisions. Three themes are: 1) embrace anticipation, 2) overcome discouragement, and 3) prioritize mindset. From the analysis process, the three themes mentioned above emerged, indicating the attributes of how rumors are associated with investors' decision-making. Note that data from participants indicates that terms like "motivation" and "quality investment" are related to this attribute.

4.5.4.1 Embrace Anticipation – Fundamental Principles

Participants can derive code-like motivation for their investment decision process from the data. The codes also embarked on diversifying and taking advantage of their consideration. They also demonstrate some ability to get and analyze professional information, improving profit and minimizing loss.

Table 4.13 Data Structure

First-order-terms to second-order-themes for "Embrace Anticipation"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Showing great motivation to overcome an obstacle	Embrace Anticipation	Fundamental Principles
Able to make a decision on beliefs		
Actions are driven by expectation and longing for a good return		

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...my business closed during the lockdown, and the shares market was the only place I could make money to survive. Luckily, I get a few "tips" (market rumor) from my friends that make some profits. I know I cannot rely on the shares market for long. At least for now, I can breathe for another few months. (Participant#18)

Term 1 (to buy): Showing great motivation to overcome the obstacle.

...it is just like a balloon; if you keep pumping in the air pressure, it is going to burst one day. Anything that goes up will come down; just a matter of time. The same goes for market info. If

too many come to you, it can certainly make you lose focus. From there, I will choose the best time to clear my position. (Participant#10)

Term 2 (to sell): Able to make a decision based on beliefs.

...if you make a right guess, you will make money. But if your guessing is against you, it will be bad. We need to be consistent, but that is hard when it comes to the trading of the share market. When I buy on rumor, I am just guessing it. The winning probability for me is 50-50. (Participant#17)

Term 3 (to buy): Actions are driven by expectation and a longing for a good return.

Based on the data, it becomes evident that embracing anticipation has the power to energize participants and help them get through tough times. When they are immersed in the share market for a long period, participants require something to anticipate in their lives. Therefore, this topic provides something to anticipate in the future and can provide the drive and perseverance to continue forward even in the face of adversity.

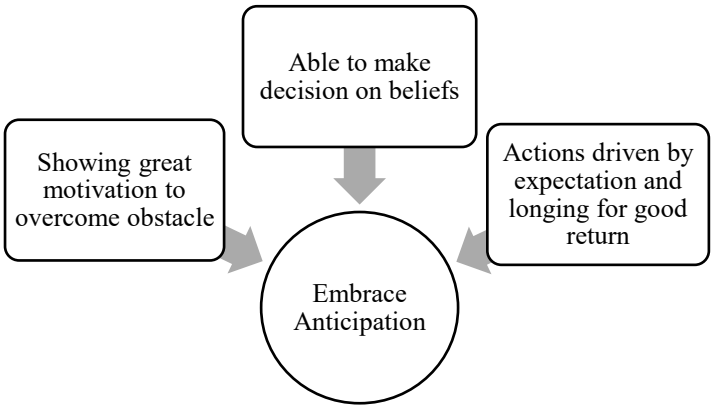

Figure 4.15

Coding Process for Theme 13

4.5.4.2 Overcome Discouragement – Fundamental Principles

Based on the data from the participants, rumor can change their feelings towards their investment decision-making and thus have an impact on their decision-making. Apart from that, participants also stressed how they feel, behave, and react when hearing rumors.

Table 4.14 Data Structure

First-order-terms to second-order-themes for "Overcome Discouragement"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Able to act in anticipating changes and needs	Overcome Discouragement	Fundamental Principles
Participants show the ability to concentrate on critical environment		
Willingness to take practical action to deal with a situation		

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...I will buy first before I share out the news, I heard with them. I will be happy if they make money, but if they do not, I will feel sorry. But it does not stop me from continuing to share the news with them. (Participant#2)

Term 1 (to buy): Able to act in anticipating changes and needs.

...people say this pandemic is going to be long. Indeed, people panic when they do not see the future or feel uncertain, especially when they face a pandemic like COVID-19 with many unclear about the future. I sold off all my shares during the lockdown and suffered huge losses. That is normal in the shares market. (Participant#10)

Term 2 (to buy): Participants show the ability to concentrate in a critical environment.

...I think when these "gurus" recommend shares to invest in, they must have some interest. This also can be one of the channels he can spread rumors. Be smart, and you cannot follow exactly what they say. I will filter before I buy. If it is a good company, then I will buy some. (Participant#11)

Term 3 (to buy): Willingness to take practical actions to deal with a situation.

According to the data, overcoming discouragement in the investment decision process is crucial, resulting in high expectations that are out of line with reality. Moreover, participants' expectations and hopes for good returns may be too high for the real situation in the market. Even when participants look for appropriate and realistic expectations, in the end, they may not be realistic at all.

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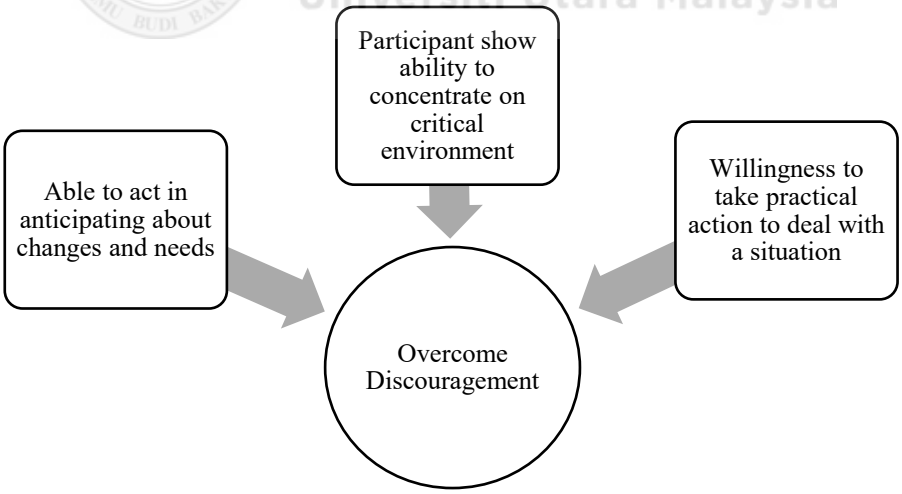

Figure 4.16

Coding Process for Theme 14

4.5.4.3 Priority Mindset – Fundamental Principles

Based on the data, participants stressed the priority mindset that could be attached to the actions associated with general culture. For example, older participants had given quotes such as "normal practice," "habits," and "use to" when the researcher asked questions related to the rumor in their investment decision-making.

Table 4.15 Data Structure

First-order-terms to second-order-themes for "Priority Mindset"

First-Order-Terms	Second-Order-Themes	Aggregate Dimension
Essentially performed fixed and unchanging attributes and abilities	Priority Mindset	Fundamental Principles
Identifying embedded quality in processes relationships		
Able to demonstrate an extraordinary mindset when dealing with decisions making		
Able to limit the extent of actions that feels comfortable		

...so far, I am ok with my trading strategy, although sometimes I am making some losses because of "tips" (market rumor); I am ok with it. Maybe others are too keen to profit in the market but end up losing their money, and I know most of them cannot take it. (Participant#17)

Term 1 (to buy): Performs fixed and unchanging attributes and abilities.

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...to have a portfolio in the share market is part of my personal wealth management. You can see this has become an important segment in the investment bank. In other words, people are more concerned about growing their money. Of course, I get influenced by my ex-colleague, who works as a personal banker. Usually, I buy from her recommendations. (Participant#18)

Term 2 (to buy): Identifying embedded quality in processes and relationships.

...ask yourself, what is the purpose you investing in the share market? To make a profit, right? No one wants to lose money in their investment. This is a rule of thumb. I do not care where all these rumors come from, as long I make some money after I sell off. (Participant#21)

Term 3 (to sell): Able to demonstrate an extraordinary mindset when dealing with decision-making.

...I know when you hear too much news, it is hard to decide, but you need to be at peace of mind when you trade in the share market. You know what you want, where you stand, and when to get out of the market. I do not really care much. If I have sufficient money to buy, I will buy. (Participant#25)

Term 4 (to buy): Able to limit the extent of actions that feel comfortable.

Based on the data, participants generally behave under normative control and intend to perform better behavior than other people whose behavior is generally under attitudinal control. Thus, from the data, a priority mindset is what can help participants achieve their personal and professional best. Thus, a priority mindset will also create the space and energy to focus on the

things that matter. This needs to reflect on the objective or purpose of that participant's intentions for them to benefit the most out of their investment.

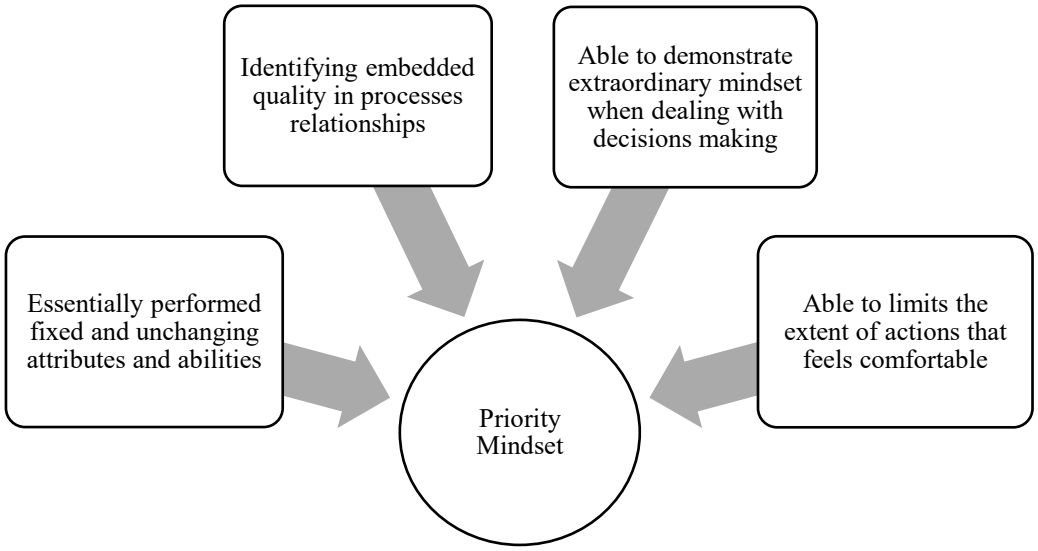

Figure 4.17

Coding Process for Theme 15

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4.6 Summary

In this chapter, a thorough and rigorous analysis was performed based on the interview information provided by participants, applying the Gioia method to construct a structured data set. The process starts by grouping and analyzing the raw interview data to identify participants' first-order codes, which were later fractionated into the researcher's second-order themes. Subsequently, similar themes are formed into aggregate dimensions to complete the data structure framework. Finally, in order to respond to the research question more comprehensively, rumors and investors' decision-making processes with respect to identified themes and aggregate dimensions were analyzed. A thorough discussion will be presented in Chapter 5.

Chapter 5 Discussion of Findings

5.1 Introduction

The results of the current research, which are presented in Chapter 4, will be discussed in this chapter. The purpose of the present study is to offer an understanding of what rumors are from the perspective of social reality, what facilitates rumors, and how rumors associate with retail investor decision-making to buy or sell. The study findings are based on participant's real-life experience, and it open a way to understand the process of retail investors' decision-making in a more holistic manner. Using the data structure developed in Chapter 4, the conceptual model was developed.

5.2 Rumor from the Perspective of Social Reality

Rumors can appear anywhere at any time, and they can be perceived as magical. In the shares market, rumors often have a hypnotic effect on the investor, particularly the retail investor. Rumors are difficult to study in real life due to their fascination, overwhelmingness, entrapment, and stirring of investors' minds. The process of rumor transmission cannot be observed from the beginning to the end. Whenever a retail investor realizes any financial rumor, it is already in the final phase of the process. Schindler (2007) asserts that the allocation of scarce resources is influenced by new information, which is the basis for the valuation of fundamentals in the Theory of Finance. Since psychological and sociological factors have a significant impact on rumors, it is important to analyze rumors from the perspective of social reality. This is critical for the retail investor to make sound decisions.

Rumor transmission is positively correlated with rumor belief (Sun et al., 2020). This is crucial for retail investors to consider when making investment decisions. Conjuring up improbable scenarios or convincing justifications for events whose significance is unclear is frequently

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equated with "making sense" (DiFonzo & Bordia, 2004). They further explain that it has been demonstrated that associating events within casual scenarios has an impact on categorical and numerical predictions as well as forecasts that follow a series of outcomes. According to William (2017), the existence of a complex circumstance serves as the starting point for the decision-making process when a retail investor hears a rumor. As an action plan is attempted, a phase of self-doubt ensues. One compares and evaluates the plan's effectiveness based on their own experiences and factual observations. As new problems arise, new potential solutions are created using new information. This cycle keeps repeating until an acceptable action is taken.

Referring to previous literature in Chapter 2, Bordia and DiFonzo (2006) in their paper that social reality has typically employed an individual level of analysis. The idea is that micro, meso, and macro dynamic processes at several levels probably play a role in real-world rumor phenomena. According to Serpa and Ferreira (2020), a social analysis must be conducted from a sociological stance that emphasizes the theoretical diversity of sociology. By acknowledging the connection between subjective meanings and practices and concentrating on the articulations between systems and actors, between structures and practices, this pluralism aims to articulate macro-social dynamics with local processes. On the other hand, Hartman (2017) asserted that an analysis of the divisions must consider viewpoints on society and culture at the macro, meso, and micro levels, as well as perspectives on groups and organizations.

Moreover, Hess (2000) asserts that it is crucial for retail investors to gain a better understanding of the influences that give rise to rumors and the most efficient strategies for dealing with them, considering the development of the internet and other new communication technologies that expedite the spread of misinformation. Moreover, Kimmel (2004), in his previous study,

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mentioned three types of financial rumors: human intervention, institutional, and situational. From the explanation, similar findings emerged and fit into the present study. Furthermore, following Difonzo and Bordia's (2004; 2007) sociology model, rumor can exert greater social influence if it enjoys wide circulation as opposed to limited circulation. Therefore, as mentioned in Chapter 2, by applying attribution theory as a guideline, the present study adapted both levels of sociology and the concept of rumor formation to fit into the present study's framework from the perspective of social reality. **Figure 5.1** illustrates the concept of sociology level with the present study's findings.

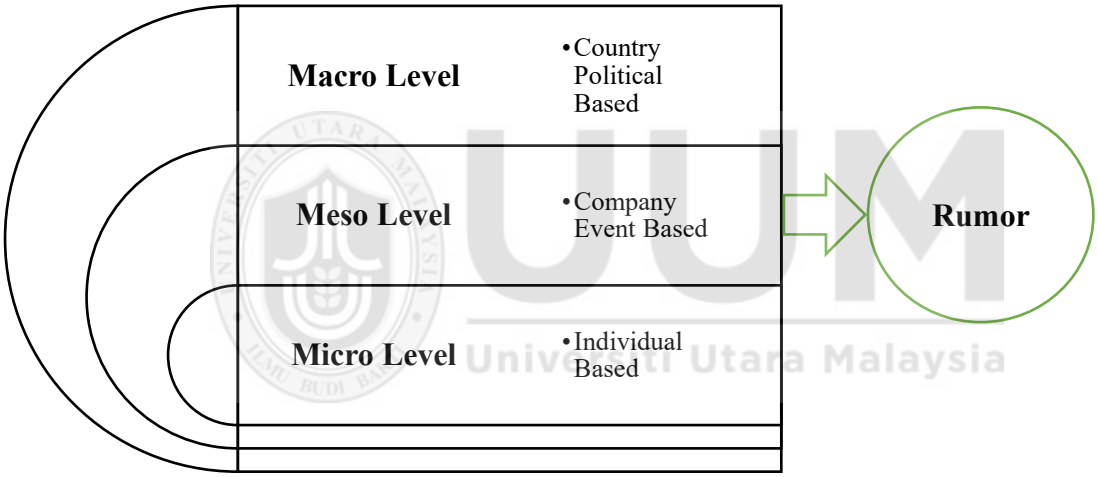

Figure 5.1

Concept of Forming Rumor from Sociology Level in Social Reality Perspective

5.2.1 Macro Level – Country Political Based

The macro level includes evaluating the root causes of social inequality from a broad perspective at the large-scale community, state, national, as well as international levels and creating solutions that target these root causes (Serpa & Ferreira, 2019). The foundation of the macro level is to indirectly assist investors through research, political activism, and extensive programs that address common decision-making (Serpa & Ferreira, 2019). This strategy was

more deeply embedded in social systems and populations. The phenomenon has the potential to impact an entire nation's population. Understanding the patterns may aid in comprehending how investors' decisions are influenced by the bigger picture.

When they strike forcefully, rumors can start fights and topple political regimes. However, they can also be brief and weak at times (Lotan et al., 2011). Even though it may take time for the effects of rumors to materialize, they can be detrimental (Wiltermuth & Heath, 2009). One worry is that even though a rumor was initially founded on inaccurate information, if it shifts public opinion and is later proven untrue, the original public opinion may not alter. Events like political stability, the current situation of the country's economy, and the level of inflation can stimulate individual sentiment and influence their decisions. Therefore, it is essential to help the investor identify needs, design interventions, and implement strategies to improve the quality of decision-making. Additionally, this can directly affect the investor's capacity for judgment and sense of willingness to invest. Analysts and the country actively monitor investor investment reactions based on the extremely broad macro environment as a gauge of the nation's economic health.

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5.2.2 Meso Level – Company Event Based

Meso and micro levels are somewhat comparable in that they aim to directly assist investors facing a range of mental and physical difficulties. The organizational and company levels, on the other hand, are the focus of the meso level. Taking a step back and analyzing issues that have an adverse effect on an organization or company's constituents is a crucial component of the meso level. Apart from that, company events are observable facts that influence how investor’s view and evaluate the associated companies. By segmenting a news article into sentences and identifying events in each of them using multi-label sentence classification, and

can recognize from corporate events (Zhou et al., 2021). Corporate events include mergers, takeovers, restructures (share buybacks, spin-offs, and capital returns), de-mergers, as well as lock-up expirations, which involve company-based events.

The most common type of rumor in the shares market is at the meso-level. Rumor spread through a company or organizational grapevine can be viewed as one of the routes for spreading information used for destructive or constructive purposes because they appear to be effective in producing unverified news (Manaf et al., 2013). Putnins (2012), in his previous studies, asserts that company-based rumor can be divided into three major parts: "in a run" techniques, contract-based, and involved in taking a controlling position in the company. At this level, any false or misleading rumor involves disseminating false, misleading, or deceptive information about a piece of news or an event that can have a huge impact on the investor. The terms "rumor" and "arbitrage" have similar connotations and mean spreading a rumor about a company-based rumor to create an artificial scenario and bring different sentiments to the investor (Zhang & Xu 2015).

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5.2.3 Micro Level – Individual Based

The most "traditional" form of social connection is frequently referred to as the micro level. Micro-level counseling and one-on-one support have deep roots in the field's long history of working with individuals, families, and small groups of people. This contributed to the establishment of the micro level in sociology half a decade ago. According to Low (2013), individuals shape their own social reality through both collective and individual action, and this process of shaping social reality is ongoing. Using a stage performance as an illustration, Goffman's theory claims that social existence is based on the separation of front and backstage, where backstage areas are rarely accessible to the general public and vice versa. The "self"

(consciousness) in these situations is a dependent feature that is far from stable. It varies in accordance with the circumstances, the surroundings, and the intended audience (Crossman & Roach 2019). Goffman theory assumed that people could face a limited number of fronts, and, usually, people are fully aware of each of them, both individually and at a group level (Park et al., 2019). This may have something to do with the parallels between the acts people undertake in daily life and theatrical performances (Crossman, 2018).

The micro level is concerned with the nature of people on a small scale, their thinking patterns, social interaction, and behavior. It emphasizes one-on-one, in-person encounters. The most significant phenomena in a particular social structure are how people react to one another and how social roles define the status of society's members. For example, suppose there is a mutual agreement between two people or groups to discuss an issue of shared interest. In that case, this phenomenon can occur in any setting, whether an organization or a natural environment, where people perform their daily tasks, such as a train station, market, neighborhood area, bus station, and others (Manaf et al., 2013). Thus, the rumor arose from a respectable discourse and spread through word-of-mouth from one person to another with motives and an agenda. The present study’s findings, particularly in forming the rumor on an individual basis, are very much aligned.

As followed suggestion by DiFinzo and Bordia (2004; 2007), the following significant aspects have been investigated as part of this study's examination of the level antecedents of rumor transmission: uncertainty, feelings, involvement about the outcome, and risk in the rumor (DiFonzo & Bordia, 2004; 2007). In addition, motivational factors in the transmission of fact-finding, relationship-enhancement, and self-enhancement have also been considered (Bordia & DiFonzo, 2007). Findings of the present study's framework viewing rumor from the

perspective of social reality led to similarity to the previous study. A thorough explanation will be presented in the section on how rumor is associated with investor decision-making.

5.3 Rumor Spread Mechanism

In this section, the present study intends to explain its findings on what facilitates rumor in investment decision-making. Information or a narrative that has not been independently verified constitutes a rumor. Most of the time, those who spread rumors do not bother to check to see if their claims are true. Rumor can spread quickly, resulting in "public turmoil" that "everyone feels without anyone in particular" (Durkheim, 2013). The internet has proven to be a fruitful rumor incubator, claims Bommel (2003). Information is shared by investors in chat rooms, newsgroups, and message boards. Word-of-mouth or newsletters are additional ways that rumors might spread. He said investors have a propensity for spreading rumors and encouraging their unpleasant acquaintances to do the same, and most investors in a small group exhibit this behavior (Bommel, 2003). Financial rumor-mongering is more than just a manifestation of the psychological characteristic that makes investors inclined to defend and justify their prior actions.

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According to Schindler (2007), most investors who hear rumors believe they are in the middle of the rumor transmission sequence and that the stock price moves as rumor transmission sequences cross paths with other investors' perceptions and actions. As a result, investor risk diffuses and spreads throughout their social, familial, friend, and professional networks, influencing investor behavior and decision-making (Schindler, 2007). Retail investors believed that the more they traded with one another, the greater their chances of profit. Dong, Wang, and Chen (2019), in their previous study, proposed epidemic models used in the study of exploring or understanding, such as the spread of rumors. Adopting this can be seen as a new

combination of infectious diseases, in which investors' rumor spread mechanisms in the population in the epidemic model. The four components of contagion are as follows:

i. Contagion Environment. Most of the time, social networks made up of humans are where infectious diseases spread. Through the edges (connections established between investors) of these networks, the nodes (investors) become infected. The networks of investors, which are made up of shareholding investors, spread the rumor epidemic. Rumor spreads along the edges (the connections between investors) in an investor network, which then affects the nodes (investors). Thus, the rumor spread similarly to viruses in terms of the environment in which they spread.

ii. Contagion Process. Viruses typically only spread from infected investors to those they encounter in the case of infectious diseases. For this, when a rumor spreads among retail investors, it first influences the related investor, who then influences the entire network of investors after having an impact on a particular node retail investor. As a result, the spread of rumors is like the spread of viruses in respect of the contagion process.

iii. Contagion Objects. The social network investor is the infected object in the infectious disease transmission process. It is a highly autonomous independent investor, and the level of its immunity affects how resistant it is to the virus. Investors in the networks of investors also respond differently to rumor contagion and have varying levels of tolerance for it, given the diversity of investors. As a result, rumor is analogous to an infectious disease in terms of contagious objects.

iv. Contagion Direction. Infectious virus transmission in social networks is radiation-based rather than directional. Like how rumors spread, the associated investors will be impacted whenever a node investor becomes infected with the rumor, and the

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contagion is non-directional. Thus, the spread of rumors and contagious diseases follow the same contagious path.

Rumor formulation can be modeled using previous studies and current findings, as shown in **Figure 5.2** below:

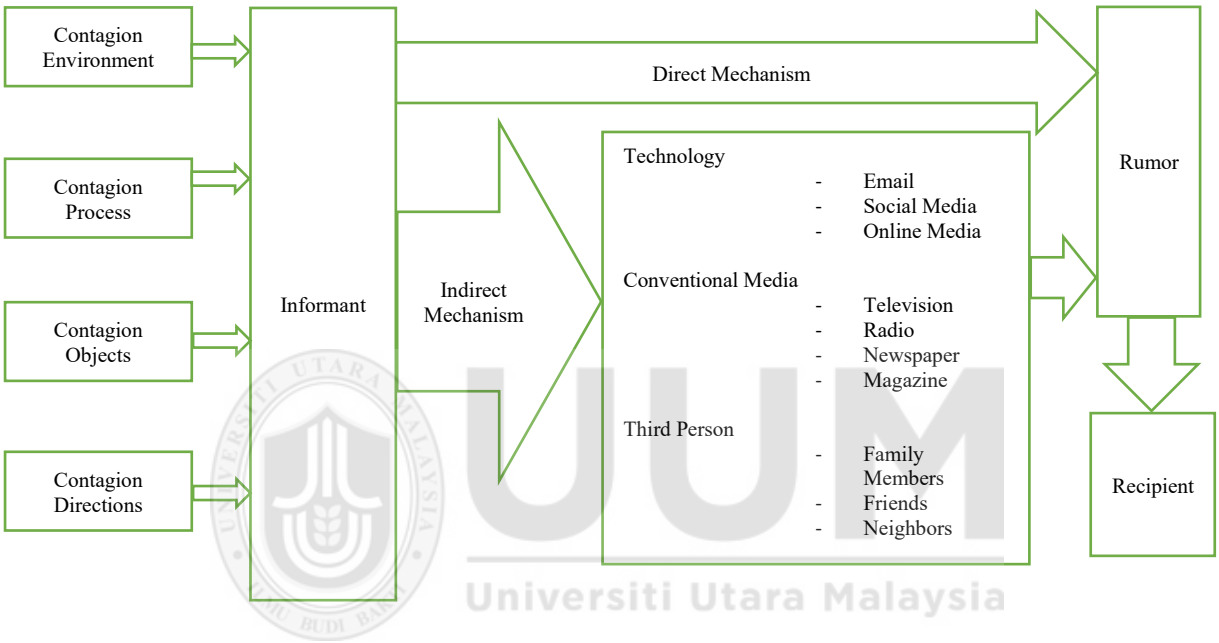

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Figure 5.2

Concept of Rumor Spread Mechanisms

5.3.1 Direct Mechanism

Bloch et al. (2014), in their previous studies, assert that a stylized "vote" that represents each investor's anticipated utility from the choice is used to illustrate collective decision-making. Several investors prefer that the choice accurately reflects the actual status of the world and is unbiased. Due to their bias, other investors favor a specific course of action regardless of the facts. Investors have preconceived notions about the real situation. This investor, whose identity is unknown, has the power to spread a rumor about the state of the globe that is either

true or untrue. Investors with bias have the motive to spread a false message (Bloch et al., 2014). Investors frequently discuss investment strategies and share knowledge. Consequently, a few knowledgeable investors may participate in the market to boost their trading gains and disseminate rumors about the market through various interactions with other investors who are close to them (such as family, friends, neighbors, and co-workers) (Dong et al., 2019).

In the model developed by Bloch et al. (2014), they combined two classic components of rumor spreading known as "cheap talk" in the decision of the rumor's initial recipient. This is done to establish a truthful message and "persuasion" (Dubois et al., 2011) in the decision of the investor, who must ultimately decide whether to transmit the message. Their model identifies the paths in a network through which investors are willing to pay attention to messages and persuade others. It focuses on network characteristics that allow objective investors to disclose plans fully. Investors tend to mechanically embrace the beliefs of their friends, family, and neighbors, and ultimately the general populace adopts these viewpoints, which may have been unfairly influenced by rumor.

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Retail investors' incentives to share confidential information with outsiders (Bloch et al., 2014). Niehaus (2011) adds a price to knowledge sharing, in which a retail investor must evaluate her own interests against the interests of her friends and neighbors. In their earlier studies on influence in networks (Hagenbach & Koessler, 2010; Galeotti et al., 2013; Calvó-Armengol et al.,), they found that retail investors all possess private information and have the motivation to share it since they profit when other investors take the same action. Meanwhile, Kamins et al. (2008) explained in their paper that direct communication regarding an incident had been found to have an even higher impact on judgment and decision-making than information from a reputable, objective source. There is also sometimes a weird scenario that happens. Retail

investors sometimes gain pleasure from their actions by directly spreading rumors. When a rumor concerns such relevant investors, other investors transmit negative rumors more than positive ones. When it pertains to trust, these actions can create positive interpersonal reactions in the recipients.

5.3.2 Indirect Mechanism

Sudhir and Anandakuttan (2014) explain that rumor is a type of communication that can spread online or offline. In recent years, social media, and the internet, in general, have become important tools for investors searching for market information. In terms of providing news to investors, social media has now surpassed traditional media. Investors may use social media to research companies and search for background information and related announcements. While the advancement of technology can provide benefits for investors, it also presents opportunities for the rumor to spread. Rumors can spread unconfirmed or misleading information about a company to many investors with little effort and at a low cost via social media.

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The effects of the indirect rumor spread mechanism can differ from those of direct rumor spread. It is easier to upload or post some comments, but it is difficult to be sure of the accuracy of the information. The rate of spread accelerates. Each investor's multiple roles and the ease of re-sharing rumors on social media allow them to spread quickly (Gerhart & Koohikamali 2019). In their previous study, Allcott and Gentzkow (2017) developed a model of media markets and content producers to describe how a rumor can circulate in society in an equilibrium state. They also made the claim that rumor is more credible than actual news because of their relative extremeness in tone and content. Their research is intended to supplement Vosoughi et al. (2018) analysis of the relative dynamics of real and rumor spread on Twitter. They found that rumors are more novel than real news and elicited "fear, disgust,

and surprise in replies," pointing to a significant shock factor that validates the study results of Allcott and Gentzkow (2017) (Kaligotla et al., 2020).

5.3.2.1 Technology

Technology advancement helps an investor obtain and share information and opinions. As a result, the way investors invest in the stock market has changed, with investors now seeking information through online channels. As a matter of fact, there has been long-term research on the rumor in modern technology. Scholars have focused on the definition of new technology rumor (Qin et al., 2018), the motivation for rumor sharing (Song & Zhu, 2018), spreading models, and determining whether new technology rumor is true or false. However, the fundamental issue with modern technology is the lack of strict gatekeeping, which has turned the internet into a breeding ground for unfounded rumors that are circulated through online channels and presented as facts.

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Silverman and Singer-Vine (2016) discovered that a whopping 75% of people who encounter rumors end up accepting them as true. When a fake piece of news goes viral on social media, the risks are even higher (Apuke & Omar, 2021). By disseminating these messages, the populace is sold a lie as if it were real. The adage "repeat a lie enough times and it becomes the truth" is, after all, applicable in the current digital world of alternative facts (Pal & Banerjee, 2020). Current research findings are much like previous studies, where many participants heavily rely on social media to gather market information. It has had a significant effect on how investors make investment decisions.

Numerous social media platforms and financial websites collect and update financial data for analysts and investors to analyze. Brokers, dealer representatives, and investment managers

previously held a competitive advantage over private investors. For example, there were more resources available to collect extensive financial records or pay for pricey firms to conduct security assessments. However, in a roundabout way, it hastens the spread of rumors. Many websites today offer financial information for free, while some charge small annual fees for more specialized data (Furhmann, 2022). Ultimately, technological innovation has given investors a great deal of power, and this has had a significant impact on how investors acquire financial information.

5.3.2.2 Conventional Media

According to Duan and Xu (2012), although modern technology has made it possible for more user-generated content to be created, which could one day serve as the key information source for investors, conventional media content still has a place in the financial market for propagating rumors. This is because the information offered by conventional media outlets is frequently more "human being" focused. Even with the author or social group bias, individuals nonetheless frequently view such content as more reliable and trustworthy than traditional sources of information (Bickart & Schindler, 2001).

Many previous studies suggested investigating the impact of conventional media on the share market. Firstly, Engelberg and Parsons (2011) discuss a causal relationship between news events and market reactions. The frequency of a company being featured in the Financial Times (a printed business magazine) and the volume of trading in the company's stock are found to be positively correlated, according to Alanyali et al. (2013) analysis of the Financial Times corpus. In addition, Peress (2007) looks at the national newspaper strikes that occurred in several different nations, investigates the causal effect of traditional media on the share market, and identifies the causal process. Moreover, academics are also interested in other traditional

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media. Apart from that, Lepori (2015) uses popular television shows as a surrogate for emotion and investigates the connection between investor mood and the U.S. shares market. Like this, Zhang (2017) investigates the impact of investor sentiment on the share market using the provincial television viewership rating of China as a proxy for the sentiment.

Evidence from previous studies has once again proven how important conventional media is in influencing the whole investment environment. As a result, numerous unobservable variables were also produced, which may have an impact on the coverage decisions that investors make regarding their investments. For example, suppose an informant can determine whether media coverage of an event can influence investors' decisions or whether some unnoticed element of the event drove media coverage and investor reactions simultaneously. In that case, it will be crucial for any financial rumors.

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5.3.2.3 Third Person

According to **Schedule 1** (Rule 3.48 in Bursa Malaysia Regulatory), there are three types of licensed dealer's representatives: commission dealer's representative, proprietary day trader, and salaried dealer's representative. A commissioned dealer's representative, or "remisier" as they are known in our country, is only permitted to trade on behalf of investors and is not permitted to carry out proprietary trading for the Commission Dealer's Representative's Participating Organization (broker). If not trading on behalf of clients, a salaried dealer representative may execute proprietary trades for the Participating Organization of the salaried dealer representative, including trades for the Participating Organization's related corporations as defined in **Rule 7.04**. Different from the two cases above, a proprietary day trader may only trade on behalf of a Participating Organization.

As per the discussion in Section 5.3.2.1, in the previous scenario in the shares market, the retail investor was heavily dependent on this group of people. Therefore, they had the ultimate advantage over spreading any rumor to the investors. Rumor is passed from one person to another and can significantly change each time they are said. Therefore, they may gradually become exaggerated and change. Here, this also depends on what the intentions of that third person are. There are also some studies that mention spreading rumors among friends and local neighborhoods, for example from Kosfeld et al. (2005). Liff and Wikstrom (2021), in comparison, allow the rumor spreader (third person) to meet and communicate with all other investors. Kosfeld et al. (2005) concentrate on the effects of a third person being infected by the rumor and spreading it to their local neighborhood (Chen et al., 2011).

Aligned with the rumor-spreading model (Chen & Wang, 2020) and the Rumor Transmission Theory by Taylor Buckner, findings from the present study have shown a hybrid of both theories. According to data, the spread of rumors on social networks is like the spread of an epidemic. Mean field equations were used by Moreno et al. (2004) to describe the rumor-spreading process in complex networks. The results of Nekovee et al. (2005) comparison of the rumor-spreading process in a scale-free network with the rumor-spreading process in a random network revealed that the rumor-spreading model exhibits various spreading thresholds in various networks. Additionally, the spread of rumors is a social contagion process in which individuals' actions and social contexts may have an impact. Meanwhile, according to the Rumor Transmission Theory, rumors may spread across a community or a group of people, depending on the circumstance (Huo et al., 2013).

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5.4 How Rumors are Associated with Retail Investors' Investment Decision-Making

DiFonzo and Bordia (2007) explain that in the early days, a researcher who particularly researched rumors repeatedly found that investors generated rumors to create a sense of uncertainty in ambiguous or perplexing situations (Rosnow & Foster, 2005). Rumors, according to Bordia and DiFonzo (2006), enabled people to feel like they had some control and a sense of purpose during an unpleasant and unsettling circumstance. According to DiFinzo and Bordia (2004), a rumor is fabricated news. He said that when information is unavailable through official means, people make up for it by interpreting the situation formally. In the past, Allport & Postman (1947) claimed that one motivation for spreading rumor was to ease the "intellectual pressure" brought on by perplexing or unclear events.

Making sense frequently means devising causal hypotheses or believable narratives for events whose interpretation is unclear (DiFonzo & Bordia, 2007). Retail investors seek causal information when making decisions and give it greater weight than non-causal information with an equivalent (or higher) level of predictive validity. This refers to the causality heuristic (Zheng et al., 2020). Additionally, these projections are anti-regressive in character when causally-related information deviates from overall proportions or historical patterns (Bewick et al., 2003).

The adage "buy on rumors, sell on news" recognizes that rumors have one effect on a security's price, and news can have the opposite effect. For this reason, investors focus on investing in the time leading up to the news or immediately after it when the market is still reacting to the news. Peterson (2022) asserts that when investors make investment decisions, they frequently consider the outcome of an event and the projected price growth resulting from that favorable occurrence. A positive effect is produced when rewards are anticipated. Both greater risk-

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taking and a higher investment drive are motivated by positive emotions. Investors' positive effect grows as the expected potential payoff gets closer in time.

The study of Behavioral Reasoning Theory is intended to facilitate modularization and improve the investment decision-making process. It shows the linkages between investors' beliefs, attitudes, subjective norms, perceived control, intentions, and behavior (Raut & Kumar, 2018). Understanding how retail investors make decisions when influenced by rumor is a major driving force behind this research. Thus, by applying Behavioral Reasoning Theory and based on the data analyzed in Chapter 4, the present study can make sense of and model a conceptual framework from participants' responses. A rigorous explanation of every single theme emerged from the data analyzed in the following section (see **Appendix 12**).

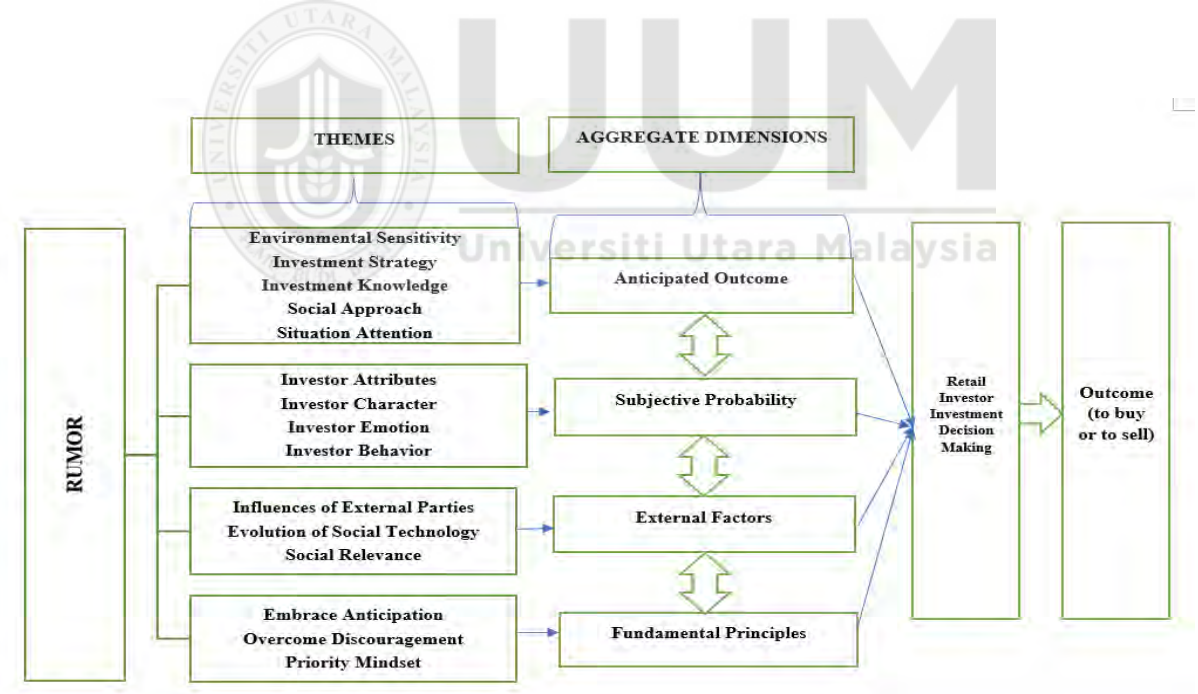

Figure 5.3

Conceptual Framework of Rumors Associated with Retail Investors' Investment Decision Making

5.4.1 Theme 1: Environmental Sensitivity

Environmental sensitivity models, as per Boele et al. (2023), presuppose that people differ in their capacity to sense, interpret, and react to environmental influences (Pluess, 2015). Various theories put out different notions regarding the different kinds of environmental influences to which people with high environmental sensitivity will react more strongly. Based on the traditional diathesis-stress or dual-risk paradigm, some people are more adversely sensitive than others, and as a result, they respond to negative environmental effects more strongly (Monroe & Simons, 1991; Zuckerman, 1999). A significant resemblance between participants was discovered that underlined the significance of rumor in their investment decision-making, which helped researchers better understand the process of rumor linked with decision-making in the current study. Furthermore, being sensitive to the origin of the rumor they are faced with enables them to make wiser decisions.

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5.4.2 Theme 2: Investment Strategy

To prevent "mental mistakes" among retail investors, attention must be paid to a particular investment approach over an extended period. Retail investors should maintain thorough records of each stock they buy for their portfolio (Chaudhary, 2013). The current study is described as "a set of rules meant to help retail investors reach their investment and financial goals" via investment strategy, according to an analysis of the participant's remarks. As a result, it can aid retail investors in avoiding "defensive behavioral finance applications" when making investing decisions.

5.4.3 Theme 3: Investment Knowledge

Information, assumptions, facts, news, as well as rumors that investors require as a guide when choosing investment instruments are referred to as investment knowledge (Latha, 2016). Retail

investors need to grasp several aspects of investing, starting with the overview of fundamental investment assessments, the degree of risk, as well as the rate of return on investment (Pajar, 2017). Rumors can affect retail investors' decision-making over their investments if they do not have enough investment expertise, according to information compiled from participant comments.

5.4.4 Theme 4: Social Approach

Social approaches, as per Bochner and Ellis (1992), imply that the mind is not restricted to the intelligence of feelings, mind, as well as body. Detailed accounts of lived experience conducted for reasons other than prediction and control have been marginalized in favor of a monolithic scientific perspective as a "monstrous" result of individualistic and other non-social attitudes in interpersonal research. Participants said that being aware of the process was essential to helping them make better selections. The social approach consequently has a favorable effect on retail investment activities. This comprises advice or viewpoints from specialists and experts on the subject.

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5.4.5 Theme 5: Situation Attention

When dealing with rumors, paying attention to the investment situation allows retail investors to swiftly detect and pinpoint potential risks or key messages. The circumstance of offering attention to the means of disclosing rumors is another crucial element of rumors related to decision-making by retail investors. It outlines the benefits of investing as well as the hazards that are most likely to arise in ambiguous circumstances. In these circumstances, retail investors are eager to seize any chance that might cause them to change their minds.

5.4.6 Theme 6: Investor Attributes

Just examining each investment's features is how retail investors must analyze their investments. Assessing the qualities of their investments is part of investment assessment. Before a retail investor makes an investment, return, risk, liquidity, tax benefits, as well as convenience are the main factors to be considered. This investment assessment is done in order to select or choose an appropriate investment. Emphasis should be given to the qualities of retail investors, such as their patience, concentration, and ability to conduct thorough research to improve their investing results. In order to make an efficient investment, investor traits must essentially be examined or assessed.

5.4.7 Theme 7: Investor Character

De Bortoli et al. (2019) discovered that retail investors were more receptive to new adventures and extroverts leaning towards more risk-prone when they evaluated the personality qualities of investor character. They are strong indicators of a risk profile when it comes to behavioral biases like overconfidence and myopia (frequently monitoring their financial performance) (Mooreland, 2011). Retail investors have a track record of making wise or prudent decisions that are both practical and useful. As a result, the decision-making process is more likely to benefit the result.

5.4.8 Theme 8: Investor Emotions

Retail investors emphasize their emotions, expressed through their thoughts, feelings, as well as actions, on anything they believe will help them develop and sustain their emotional decision-making over time. This is when emotion investing occurs. Retail investors lose their ability to think clearly, become more pessimistic, lose clarity of thought and thinking concisely, as well as become impatient when they are anxious or stressed, as per Mitroi and Oproiu (2014).

Due to the high stakes involved in making investments financially, professionally, and personally, there is an increase in stress that results in biased information-processing errors, such as overtrading, overconfidence, or even the illusion of control. The behavioral biases and habits of retail investors might be detrimental to their investment performance. They enjoy the illusion of action. The human brain prefers action to inaction, thinking, as well as planning while under stress. We frequently forget that there are no shortcuts to worthwhile destinations because rational analysis merges with the gut instinct and prejudices of the retail investor.

5.4.9 Theme 9: Investor Behavior

Baker and Ricciardi (2014) claim that investor behavior frequently diverges away from reason and logic. Investment decisions are made more difficult by emotional processes, mental errors, and individual personality features. Retail investors base their decisions and judgments on their own tastes, opinions, and past experiences. They develop time-saving shortcuts or heuristics that divert them from logical, long-term thinking. Retail investors exhibit a variety of behavioral biases that affect how they make investment decisions. Although it can be challenging, biases can be lessened. To do this, one must be aware of their behavioral biases, fight the urge to act in such a way, as well as create and stick to unbiased investing plans.

5.4.10 Theme 10: Influences of External Parties

One of the most frequent ways that a rumor might affect an investor's choice is through influences coming from external sources. However, external influences, including domestic economic considerations, political stability, as well as technology, have an impact on the investment decisions made by retail investors. Even though some businesses have performed better than others in weathering the storm, this sequence of events has had a severe effect on

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the world's share markets. As a result, external factors have a big influence on what retail investors decide to invest in. This means that retail investors are more inclined to partake in the share market when the external environment is more stable.

5.4.11 Theme 11: Evolution of Social Technology

Participation in social and technological activities has significantly influenced their decision-making. They require this when they want to corroborate specific rumors or pieces of news. In the quest for widespread communication and collaboration, social networking websites like Facebook, LinkedIn, and microblogging platforms like Twitter continue to be the go-to options. In order to encourage user participation in collective behaviors on online social media platforms, the behavior of the online community is essential for identifying social elements. It can aid in the establishment of strategies to develop the essential circumstances for creating and sustaining social communities by employing the social characteristics that were identified from the study of online community behavior (Ngai et al., 2015). This has demonstrated indisputably that social networks have grown and improved their integration, with information initially getting to investors.

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5.4.12 Theme 12: Social Relevance

Human behaviors, routines, and abilities that affect social lives are referred to as social relevance. Social relevance is predicated on verbal competency, claims Albee (2015). Social relevance is about context and concept expression as opposed to a broadcast strategy built on conventional "push" techniques. The same brain activity occurs when a retail investor performs the same actions personally as it does when they watch other people do it. Areas in the inferior parietal lobule and ventral premotor cortex are part of this "mirror system" (Kilner et al., 2006).

Retail investors took the actions in making investment decisions matter in a specific context that has to do with things other than themselves, other people, as well as a specific society.

5.4.13 Theme 13: Embrace Anticipation

Accepting anticipation can typically improve patience, optimism, and motivation while reducing frustration. Certain problems can be improved by anticipating good things to happen. It can be just as fun to look forward to a few pleasant little surprises as it is to anticipate a huge one (Schumpf & Rego, 2009). Embracing anticipation can motivate retail investors and support them during difficult times. They require something to look forward to in their lives when they are engaged in the share market for an extended period. This gives one something to look forward to in the future and can give one the perseverance and drive to move forward even in challenging times.

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5.4.14 Theme 14: Overcome Discouragement

It is indeed important to avoid becoming discouraged throughout the decision-making process for investments because this can lead to unrealistically high expectations. As retail investors make their selections in the share market, discouragement can pass from one individual to another. As a result, retail investors' hopes and expectations for positive returns may be excessively high compared to the actual state of the market. In the end, expectations may not be realistic, even though people search for suitable and potentially reasonable expectations.

5.4.15 Theme 15: Priority Mindset

Whenever a retail investor opts for a particular objective, they cross the metaphorical Rubicon and enter the pre-actional phase, where detecting opportunities to operate in the future and selecting a course of action, such as deciding when, where, as well as how to act, are of prime

focus. As a result, having an implementation mindset is advantageous. Retail investors focus on indicators that indicate possibilities to act during the following actional phase, acting to achieve their selected goal (Gollwitzer & Keller, 2016). A priority-oriented perspective will help free up time and energy for concentrating on the things that are truly important. This calls for consideration of the motive or goal of those retail investors. The objective is for them to maximize their investment.

5.5 Aggregate Dimension

According to Gioia et al. (2012), when the process of first-order terms and second-order themes emerged, the final stage and perhaps the crucial step in constructing data structures was the aggregate dimension. The data structure not only allows for the configuration of data into a sensible visual aid, but it also provides a graphic representation of how to conduct analysis from raw data to terms and themes (Pratt, 2008; Tracy, 2010). Rigorous explanation of every single aggregate dimension in the following section (see **Appendix 13**).

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5.5.1 Aggregate Dimension 1: Anticipated Outcome

The reliability of decision-making is associated with the anticipatory skill of the investor. Most investors have some intrinsic ability to predict outcomes, but anticipation can also be learned through experience. According to Robb (2021), investors are more successful in assessing the likelihood of a future outcome proportional to the volume of relevant information and shorter time intervals between the present and the expected conclusion. While having a lot of information is crucial, what matters most is whether it will help you achieve your goals. Investors should be equally concerned with the factors influencing their investment decisions. Since change is constant and the future environment is uncertain, anticipation encourages "pivoting," which allows investors to plan for the worst when making decisions. This allows

them to continue, rather than becoming immobilized in shock, in the event of what other people might view as catastrophic events (Robb, 2021).

The typical consequentialist perspective, which does not consider the important influence of emotions felt now of choosing the decision-maker, is improved by the inclusion of expected emotions (Lucey & Dowling, 2005). Findings from current research on the anticipated outcome of rumors associated with investor decision-making are like a model of feelings developed by Loewenstein et al., (2001). The main goal of the model was to account for the fact that investor emotions at the time of decision-making can affect that decision. The model is built on multiple consequentialist theories, all of which have strong supporting evidence. Every component of the model works together to demonstrate how the decision-makers' feelings are a factor in every step of the decision-making process.

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5.5.2 Aggregate Dimension 2: Subjective Probability

According to Pinder (2017), although it has not been documented, subjective probability is based on an expert's experience. There are several circumstances where experienced probability estimates from experts are needed. Due to a lack of evidence to explicitly identify the range and variability of the uncertain components, analysts and decision-makers frequently employ subjective probability to recognize uncertainty connected with a key part of a choice (Pinder, 2017). It directs investors to their imaginations of beliefs, perceptions, and personal evaluation. This is important to the participant when investors do not have any experience, and anyone's opinion of the probability of the rumor is useful to them. Most of the subjective probability is influenced by human perception and experience. By drawing on their own knowledge and expertise, the investor is also able to obtain insight. Subjective probability is mostly reliant on an investor's assessment or intuition about a scenario and the anticipated result

rather than being purely generated from objective data and facts. Therefore, it is true that investors frequently rely on intuition, generalizations, or old wives' tales to support making a particular investment that relies too heavily on irrational and emotional factors.

Considering the results of the current study, the particularly subjective probability of rumor associated with investor decision-making is very much like and aligned with Jefferey and Putman (2015). According to Jeffrey and Putman (2015), the basis of economics and finance has been the expectation of the value of outcomes and probability. The establishment is highly influenced by personal bias and might vary from person to person. The likelihood of an event occurring determines its probability, which is immensely flexible even in terms of one person's opinion. Different investors' personal opinions may have an impact on the decisions. These can be connected to the investor's background or to other experiences he has had in his life. Even though the investor's belief can be rationally justified, the prediction is still only a belief. It frequently depends on how each person perceives the data given to them.

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5.5.3 Aggregate Dimension 3: External Factors

In a general context, external factors are determined by conditions that are external to the environment but have some impact on it. This phrase is frequently used to refer to aspects of dimensions that are out of control, including society, the economy, rules, and the political system. Furthermore, in the shares market, it could be construed as an ecosystem organized by an invisible hand because of its characteristic of fewer restrictions compared to institutional investors. Using their own thoughts and interests as their guides, retail investors play and act freely. However, considering that investing involves risk and uncertainty, investors may be unsure of the future results and implications (Bikas & Glinskyte, 2021). Perry (2022) suggests

that investors can obtain useful information from external parties, like global economic conditions, when deciding on their investment. This can reduce the risk of their investment.

According to Alcocer (2017), analyzing the investment strategy of the same industry can provide a significant advantage and make investment decisions more vulnerable. The evolution of technology is also an important factor in financial behavior. It has dramatically changed how investors make their investment decisions, and it continues to make waves and change investors' minds with every new technological innovation. These external factors have naturally influenced and impacted overall social relevance for retail investors. They appreciate the transparency of market rumors and trustworthiness in the process of making any investment decisions. However, based on the term given in the interview, they seem to be more afraid of the global market, political stability, and the effect of the COVID-19 disease, which recently hit Malaysia's economic conditions. All this can be translated into risk factors, which have been identified as one of the elements that contributed to the present study.

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5.5.4 Aggregate Dimension 4: Fundamental Principles

According to Kant (2012), physics, ethics, and logic are the three sciences that make up philosophy. This division is appropriate for the nature of the thing. The only way to make it better is to add the underlying principle so that others can verify its completeness and accurately identify the essential subdivisions (Kant, 2012). The overall idea of behavior incorporates a person's fundamental personality and environmental factors. Someone's potential response depends on the circumstances in which they find themselves. These elements cover a wide range of personality traits. However, personality is also intricate and diverse. A person may exhibit behaviors that span multiple personality traits (Cherry, 2022).

From the explanations, the present study is aligned with Prospect Theory, which had to do with the likelihood and severity of adverse deviations from the applicable standard. According to Lin (2021), during initial term editing, the outcomes of participants toward investment decisions are ordered based on a certain heuristic. Participants establish a reference point, identify which outcomes they deem equal, and then classify lesser outcomes as losses and greater outcomes as gains (Tversky & Kahneman, 1992). Additionally, it seeks to eliminate isolation effects from investors' predisposition to frequently isolate successful possibilities rather than treating them collectively. Coding, combining, segregation, cancellation, simplification, and the detection of dominance can all be seen as components of the editing process. Investors act as though they would compute a value (utility) based on the possible outcomes and their corresponding probabilities and then select the alternative with the highest utility during the subsequent evaluation phase (Lin, 2021). The present study's core value is to understand how investors react when they come across rumors in their investment activity. Making sense of investors' opinions and points of view has led to rich personality traits, hence the fruitfulness of the whole present study's findings.

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5.6 Retail Investors' Investment Decision-Making

Choosing the right resource might be challenging due to the abundance of available market information, which presents a hurdle for investors. It sounds like having a lot of options and simple access to free information is a net gain for investors overall. However, having so many options might be overwhelming. Moreover, it has become more complex when rumor plays the role of a rascal to interfere with investors' decision-making. Thus, the existence of efficient markets and logical investors has been contested by proponents of behavioral finance (Joghee et al., 2021). Previous behavioral finance research has used evidence from the market to demonstrate the existence of irrational investors who impede the shares market's ability to

function rationally and investors' ability to make rational decisions (Nofsinger, 2001). Furthermore, decades of research have shown that the decision-making process of investors is a complicated amalgam of many biases that guide investors' behavior. At the same time, they select the best among various investment opinions (Chang et al., 2010).

Srivastava et al. (2019) asserts that making decisions requires several phases, including learning, representation, valuing, choosing an appropriate course of action, and executing it (Rangel et al., 2008). These actions are interconnected to result in a clear decision. From the Malaysian context, Jaiyeoba et al. (2018) explain that psychological biases have a significant impact on investors. Still, there is not enough scientific data in our country to say if these prejudices apply to all investors equally. In their prior study, Chong et al. (2019) concentrated only on herding in China, whereas Chuang and Susmel (2011) examined overconfidence in Taiwan based on a single psychological bias. According to Fisher and Statman (2002), Shiller (2015), and Nofsinger and Varma (2014), investors are susceptible to the same psychological biases. This is because all investment groups' surrounding environments significantly influence their real decisions, particularly when a rumor is present. People build beliefs through experiences, inferences, and deductions for a range of emotional, subjective, and psychological reasons depending on the environments established by friends and co-workers, family, culture, religion, and society at large, according to Shermer (2012).

According to Raut (2020), individuals are frequently referred to as "satisfaction seekers" instead of "ideal decision-makers" (Kahneman & Tversky, 2013). Applying this to the shares market, it can be assumed that investors do not naturally make rational decisions. Many studies have demonstrated that investors' inconsistent and irrational decision-making is influenced by a variety of cognitive and psychological biases (Costa et al., 2019). Jaiyeoba et al., (2019)

mentioned in their paper that the investor's mental load often contains biases that affect investment choices. In some situations, they might be beneficial to them, but in others, they might influence cruel or useless decisions. These biases can impact people's final decisions since they are an inherent element of human nature. Recognizing these biases' effects may help lessen their influence when making investing decisions.

5.7 Summary

This section discussed the findings in detail based on the analysis conducted in the earlier chapter. This chapter's main goal is to explain the findings of the current investigation in the context of earlier research and theories. By combining the findings, a conceptual framework was created, and consequently, a concept was also established for each research question. From the discussion presented in the present study, contributions, recommendations, and limitations are noted and provided in the following chapter as the research is complete.

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Chapter 6 Conclusions

6.1 Introduction

The conclusion of the present study is covered in this chapter. It begins by recapping the study's goal before presenting the key findings in the first part, titled concluding remarks. Subsequently, the results are utilized to highlight contributions. A summary of the study's limitations is then included. Finally, areas for further research are noted before the chapter is concluded.

6.2 Concluding Remarks

The present study aims to evaluate how rumor influences retail investors' decision-making within the framework of the qualitative research paradigm. Study in rumors or investors' decision-making itself is not new. However, looking into rumors associated with retail investor decision-making from the context of behavioral finance in Malaysia is still considered a new and uncharted territory that even local researchers might have overlooked with the related issues. Therefore, the present study sets out the reality of how investors make their investment decisions when they come across market rumors. Previous studies have presented mixed findings, especially on investment decision-making. Therefore, the present study's goal was to consider investor behavior in every possible aspect based on their direct interaction with their experience.

Considering the issue's applicability and the literature's backing, the present study employed social constructionist ontology to examine the issue where this approach matches the study's nature in addressing the research questions (i.e., "what" is a rumor from the perspective of social reality, "what" facilitate rumor in investors' decision making, and "how" rumor associate with retail investor decision making to buy or to sell). Employing Gioia's methodology as an

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analysis strategy, the first cut of the contextual analysis indicated 15 attribute themes through a second-level distillation process. Finally, 4 main aggregate dimensions were identified, namely anticipated outcome, subjective probability, external factors, and fundamental principles. Probing further into the analysis, the findings indicate that the magnitude of making sense of these dimensions has strong relevance from a sociological, psychological, and financial perspective. This finding is aligned with Schindler's (2007)'s three major cornerstones as major essence in behavioral finance.

Based on analyses, the present study discovered that the level of market rumor could be integrated into the level of sociological influence. A concept (**Figure 5.1**) of forming rumors from a sociology level from a social reality perspective was developed to depict these two. The framework is to answer the first "what" question. Consequently, to answer the second "what," the present study developed another concept (**Figure 5.2**), namely the rumor spread mechanism. This framework is to present what facilitates rumor in investment decision-making. Two mechanisms were discovered, which are direct and indirect ways to spread the rumor. Finally, another conceptual framework (**Figure 5.3**) was developed to thoroughly explain the process of making sense of "how" rumors are associated with investor decision-making. This is where many explanations focus on the psychological perspective. In a nutshell, the present study has rigorously presented the findings in multiple dimensions in the behavioral finance context.

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6.3 Contribution

The present study has contributed in three main areas, namely practice, theory, and methodology. The contribution of the present study from the theoretical realm can be viewed from the perspective of consolidated theories in explaining investors' decision-making.

Meanwhile, the present study indicated support or partial support for some available and earlier theories in rumor transmission, such as Maki-Thompson (MK) model and Daley-Kendall (DK) model. Note that a closed and evenly distributed population is divided into three categories in the DK model: those who are ignorant of the rumor, those who have heard it and are actively spreading it, and those who have heard it but have stopped spreading it. According to the law of mass action, the rumor spreads throughout the population through pairwise interactions between spreaders and other population members. In a pairwise meeting, the spreader tries to "infect" the other person with the rumor. Here, the difference from DK Model in the present study is to investigate the process of how investor make their decisions when they hear any market rumor.

The present study has added to the knowledge of the consequences of the National Sustainable Development Goals (**SDG**s) program from the perspective of societal impacts. Malaysia started and took part in consultations for the Post-2015 Development Agenda process throughout 2014-2015 in conjunction with the final review of the Millennium Development Goals (**MDG**s) as well as preparation for the Eleventh Malaysia Plan, 2016-2020, the five-year national development plan for 2016-2020. These include multi-stakeholder focus groups, three national workshops located in Peninsular Malaysia, Sabah, and Sarawak, programs held by the United Nations (**UN**), and other associated activities. Owing to them, the 2030 Agenda and SDGs were adopted (EPU, 2021). The 17 **SDG**s tackle the global issues of poverty, inequality, and environmental degradation. Plus, there are urgent appeals for both the public and private sectors as well as communities to act. The **SDG**s recommend focusing on collective action to address them (Adams et al., 2020).

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Retail investor engagement in the Malaysian share market has significantly contributed to the nation's **GDP**, per the **SDG**s Cluster Working Committees (**CWC**) on the Inclusive Economic Development Pillars 8 and 10 of **SDG**s. The real **GDP** of Malaysia increased from RM1,300.8 billion in 2017 to RM1,343.9 billion in 2020 or a 2.3% annual growth rate over that year. This is greater than the average yearly growth rate of the world economy, which increased by 1.7% over the same time span. With an annual growth rate of 1.4%, Malaysia's **GDP** per capita increased from RM40,620 in 2017 to RM41,151 in 2020. It expanded by 4.5% in 2017 and 3.7% in 2018 but decreased by 4.0% in 2019 and 6.0% in 2020 (EPU, 2021).

As part of Pillar 16 of sustainable development, governance, social cohesion as well as partnership, ensuring everyone in Malaysia has access to justice and legal assistance is another contribution. Although there are still difficulties in getting justice because of financial or physical limitations, initiatives are currently being implemented to enhance people's access to justice. Malaysia is dedicated to creating powerful institutions to guarantee a competent government. To achieve the **SDG**s, Malaysia will continue to take a comprehensive approach, incorporating accountability, efficiency, and efficacy principles into its planning, delivery, and policy-making processes. Other than that, the fight to maintain integrity has likewise become more intense. Retail investors should be a group to be protected in terms of ramifications and governance in future undertakings.

6.3.1 Contribution to Practice

Rumor has been linked to retail investors' decision-making for several reasons, and difficulties have been identified. Although investor decision-making has been long discussed among previous researchers, this spectrum is still in Malaysia's infancy, especially when dealing with rumors. The data were gathered from the social reality, i.e., a share market participant, to

understand their real experience with numbers of years of investment on how they make their investment decision when they hear any market rumors. Note that the analysis highlights some key variables and the subsequent attributes emerging from sociological and psychological factors. This can be utilized as guidance for the investor making their investment decision, building a strong foundation for investors. The findings of this study also provide useful insight into the mechanics underpinning investors' decisions to invest in shares. Results indicated that investors employed their cognitive and value systems to respond to rumors in the context of these judgments.

Studies on retail investors especially involving rumors associated with investment decision-making, particularly from Malaysia's perspective, are still a subject that is potentially being overlooked. However, the phenomenon is happening and will probably pick up pace in the coming years. The present study is probably one of the first in Malaysia to highlight the process of retail investors' investment decision-making. On a smaller scale, it could be a reference mechanic for licensed dealer's representatives, commission dealer's representatives (in the present study known as remisier), and salaried dealer's representatives to understand how their investor make their investment decisions. On a bigger scale, it could be a starting point for governmental and other regulators like **BURSA** and **SC** to look at the bigger picture of this phenomenon, validate its actual existence, and understand its overall implication to the shares market fraternity in the country.

The present study highlighted **SC**'s vision to make all trading activities disclosable with requirements and therefore be increasingly oriented towards specific and comparable metrics, including using more standard formats that focus on information relating to risks and returns in retail investors' investment activities. In addition, all disclosures shall also provide greater

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clarity on the obligations of investing activities and must address commitments to take specific actions in response to material events. Additional disclosure requirements and safeguards will be imposed on high-risk and complex investment behavior. These include disclosures on potential risks through pay-off structures to increase investor awareness of potential maximum losses and the circumstances that can trigger such losses.

6.3.2 Contribution to Theory

From a behavioral finance point of view, in previous literature, according to Tversky and Kahneman's (1992) prospect theory, investors base their decisions on perceived gains rather than losses since losses and gains are valued differently. This theory is regarded as more psychologically true of how decisions are formed. Note that the general idea behind prospect theory is that if an investor is provided with two equal options, one of which is offered in terms of prospective gains and the other in terms of potential losses, they will choose the option that is provided in terms of potential gains. Moreover, Kahneman and Tversky (1972); Tversky and Kahneman (1982, 1992) investigated decision makers' evaluation of uncertain possibilities by conducting several experiments. Research from these two great scientists mainly explains two major possible conjunction fallacy, which is semantic and cognitive. Findings from the present study have indicated support for their previous contributions in behavioral finance, particularly in the understanding goal of investors in every investment decision-making.

6.3.3 Contribution to Methodology

On methodological contribution, the present study took a paradigm shift by conducting research utilizing qualitative rather than quantitative methodologies, which have been more dominant in recent years, especially in investor decision-making. Additionally, the interpretivist approach, also known as a social constructionist approach-provides rich and

"first-hand" material from actual living individuals, which is an important contribution to knowledge from the standpoint of academia. Finally, while many research typically applies the Gioia method as a large multi-method analysis approach, the present study applied the Gioia method as a principle throughout the present study. It was done especially in the analysis section, which supports qualitatively based inductive research with methodical rigor and creative imagination.

6.4 Limitation

Despite the contribution in various aspects, the present study has its limitations that need to be highlighted. First, while the present study has been guided by Creswell (2013) regarding the number of participants, data were only conducted in the Klang Valley. No doubt, in terms of the number of populations in Malaysia, Klang Valley is the ideal place to gather data. Still, it could be extended to other major cities like Johor Baharu or Georgetown or maybe cities in East Malaysia like Kota Kinabalu or Kuching (DOSM, 2022).

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Other challenges exist in obtaining information and performing direct observations to validate the participant's claims. Due to the recent pandemic breakout and safety reasons, most interviews were conducted online rather than the classic face-to-face method. Though online interviews have advantages, their major setback is the absence of actual human-based interactions and nuances that help better-probing activities. More often than now, the interview had to be paused, delayed, restarted, or, worst, postponed due to technical issues such as network disconnection and audio and video issues that staggered the interview process flow due to the Movement Control Order (**MCO**) in Malaysia. The present study could not travel to meet some participants as part of the observation activity who experienced rumors in their investment decision-making. However, these occurrences only involve a handful of the

participants, as the present study validated most of the participants' claims via face-to-face or emails.

6.5 Future research

Behavioral finance is a large and proportionally additional field. Hence, it is recommended that future investigation is required. A substantial number of sociology and psychology factors are left to be discovered. The present study can let people understand how investors make their investment decisions regarding rumors. Findings, at the very least, will assist investors in comprehending the influence of their own social and psychological aspects on their decision-making. This also would help Malaysia's regulators like **BURSA**, **SC**, and other policymakers in helping them comprehend how sociological and psychological elements affect the decision-making of retail investors. While the present study is only focused on how rumor is associated with investor decision-making, future research should go in-depth to find the truth about the main agenda of the people behind those who start to spread the rumor in the market.

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6.6 Summary

This section connected the investigation from the conceptualization stage to the conclusion stage, unifying the entire research project. The reasons for any issues with the rumor being connected to investor decision-making have been addressed. Although investor decision-making has been long discussed among previous researchers, this spectrum is still in Malaysia's infancy, especially when dealing with rumors. Therefore, the present study gathers all the output from real participants in the shares market to understand their real experience with numbers of years of investment on how they make their investment decision when they hear any market rumors. The analysis highlights some key variables and the subsequent attributes

emerging from the factor of sociological and psychological factors, which can be used as guidance for future research.

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APPENDICES

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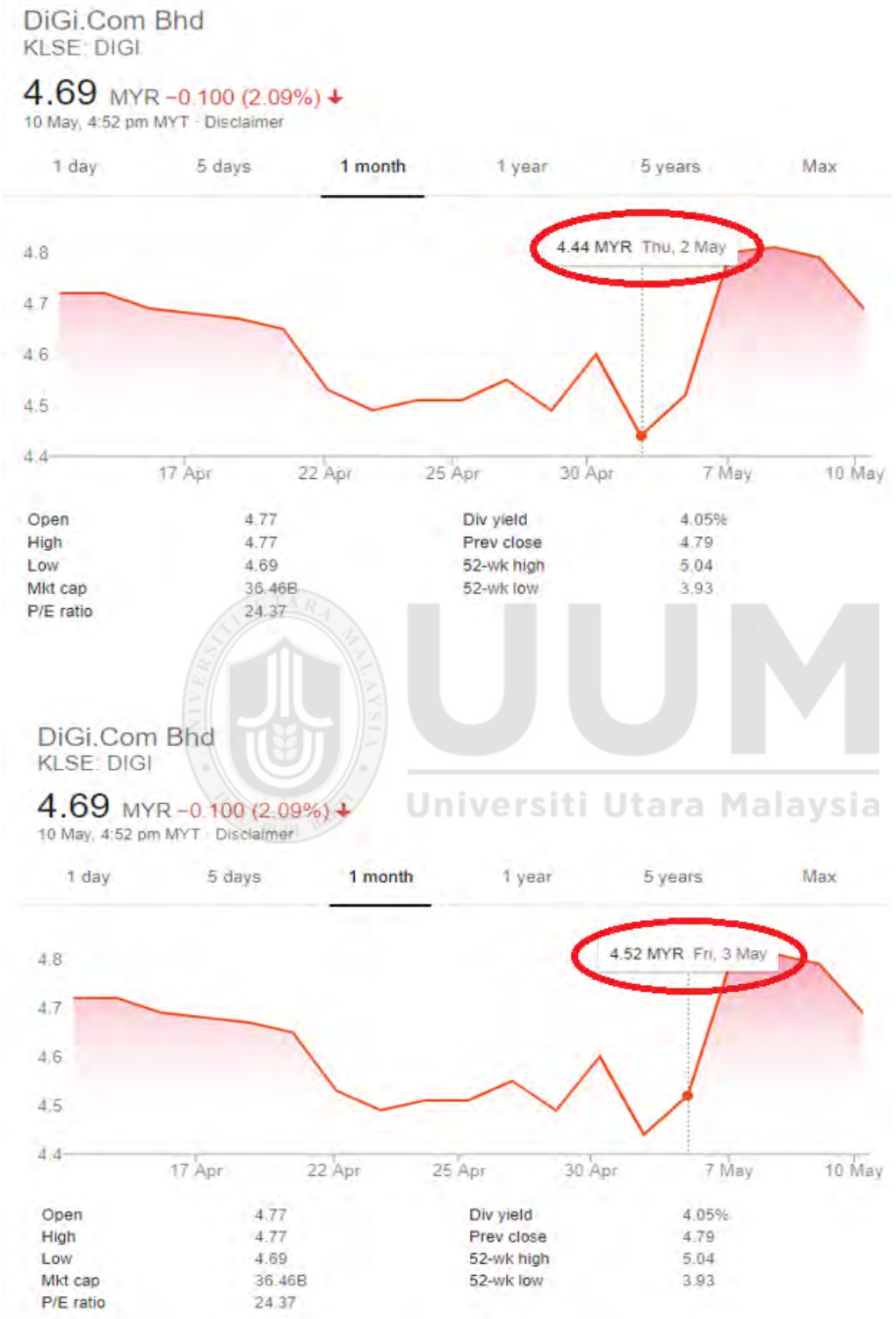
Appendix 1

Movement of Digi & Axiata Share Price



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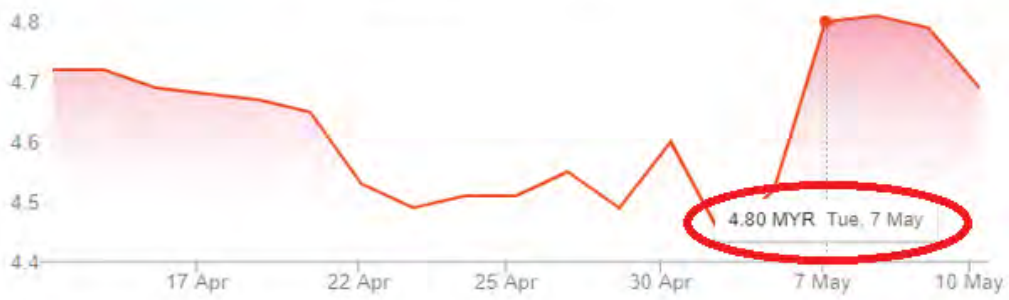
DiGi.Com Bhd
KLSE: DIGI

4.69 MYR −0.100 (2.09%)
10 May, 4:52 pm MYT · Disclaimer

1 day | 5 days | 1 month | 1 year | 5 years | Max



Open	4.77	Div yield	4.05%
High	4.77	Prev close	4.79
Low	4.69	52-wk high	5.04
Mkt cap	36.46B	52-wk low	3.93
P/E ratio	24.37		

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Axiata Group Bhd
KLSE: AXIATA

4.39 MYR −0.090 (2.01%)
10 May, 4:59 pm MYT · Disclaimer

1 day | 5 days | 1 month | 1 year | 5 years | Max

Open	4.40	Div yield	2.16%
High	4.51	Prev close	4.48
Low	4.30	52-wk high	5.37
Mkt cap	39.85B	52-wk low	3.20
P/E ratio	-		

Axiata Group Bhd
KLSE: AXIATA

4.39 MYR −0.090 (2.01%)
10 May, 4:59 pm MYT · Disclaimer

1 day | 5 days | 1 month | 1 year | 5 years | Max

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Mkt cap	39.85B	52-wk low	3.20
P/E ratio	-		

Appendix 2

Raw Data to First-Order-Codes

Quotes from Participants	**First-Order-Codes**
…I will buy first before I share out the news, I heard with them. I will be happy if they make money, but if they do not, I will feel sorry. But is does not stop me to keep continue sharing news to them. (Participant#1)	Able to act in anticipating about changes and needs
…because of my profession, I am more into numbers rather than charting, and I will do fundamental checking. There is no short cut in my decision making. Any market news comes to me I will carefully check their balance sheet and company background before i enter the market. (Participant#2)	Degree of participant's willingness to endure within their portfolio
…I love numbers since I was young. This has led me to become an accountant when I grow up. Numbers have patterns, and patterns fascinate people. I think therefore I do not believe in rumors so much. It is a big NO for me buy on rumor. (Participant#2)	Setting the applicable framework as golden rules in
… he is so long active in shares market, and I believe with his experience, his recommendations will help towards winning side. Almost all my investment portfolio is from his recommendations. (Participant#3)	Bias occurs when participant in selection process
… if you do not perform due diligence when you buy shares, your investment could be in high risk. What is the point if you do investment just based on rumors? I will never do that. Before I making any investments, i always do my own checking to make sure my investment will be a wise one. (Participant#3)	Participant able to demonstrate strong self-discipline in action
…It takes short time for foreign market to rebound and it happen same way to our share market. US market rebound not even in one week after sharp fall in March 2021. This has given huge impact to our share market. They even say in TV market is going to be better this year. This has given me huge confidence in our market. For sure I will wait for that to sell my shares. (Participant#5)	Participant able to identify the correct macro and micro economic forecast
…I am kind of person not easy to get influence by any situation. You may share news or rumors to me, but my stand is very firm. My ideology in investment solely relies on my own decision. (Participant#6)	Stubbornly holding to one's own opinion

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…thanks to his "tips" (market rumor) ask me to buy companies that related to CPO (crude palm oil). Raises of CPO price helps me to make more than 20% profit gain on average, mainly from oil and gas companies. (Participant#6)	Determinant value of information by its importance to the decision maker
…If you talking about 10 years back yes, it is true people gossip and spread rumors in coffee shop. Although the power of spreading rumor is limited but they still can actively trade. Now everything has changed, everyone using smart phone, even old uncle aunty also knows how to use smartphone to trade. Same to me, I buy shares using smartphone now a days. (Participant#8)	Leveraging on evolvement of technology for faster decisions and actions
…all my investment is from my hard earn money, and I know I should make the best decision in every move I made. I know my investment cannot last long if I solely depend on rumor. So, for now before I buy shares, I will spend a lot of time to study on the market. When shares price drop, I will buy some to average back my initial purchases. (Participant#10)	Decided to do accumulation process by averaging up prices of all the shares purchases
…I am 61 years old and I am still in the learning process trading shares. Do not limit yourself and give excuse because your age. If you want to know something, you must learn how to get the answer. Always ask people around you if you want to know. But do not just listen to people without checking the source. Refer to newspaper at least to confirm before you buy any shares. (Participant#10)	Older investors make more conservative investment decisions and their decisions reflect greater knowledge about investing
…it just like a balloon, if you keep pumping-in the air pressure, it going to burst one day. Anything goes up will come down, just matter of time. Same goes to market info, if too many comes to you, certainly it can make you lose focus. From there I will choose the best timing to clear my position. (Participant#10)	Able to make decision on beliefs
…people say this pandemic going to be long. Indeed, people get panic when they do not see future or feel uncertainty, especially when they face pandemic like Covid-19 with many unclear about the future. I sell off all my shares during lock-down and I suffer huge loses. That is normal in shares market. (Participant#10)	Participant show ability to concentrate on critical environment
…not every day is a good day, you need to wait for the right timing. If I missed out, I will look for other company in the same sector. Normally its movement of share price will influence other companies in the same sector. Still, I will buy, just wait for right timing. (Participant#11)	Able to identify sources and strategy involves to make decisions

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…I think when these "gurus" recommend shares to invest, they must be having some interest. This also can be one of the channels he can spread rumors. Be smart, you cannot follow exactly what they say. I will filter before I buy. If it is a good company, then I will buy some. (Participant#11)	Willingness to take practical action to deal with a situation
…why so headache? I can just follow his recommendations. You are not expert, but they are. So, just listen to expert. My trading account is under him for years, I trusted him. When he says buy, I will buy. (Participant#12)	One party in a set of process has a direct influence on another party
…she says the longer time to turn rumor into news, the lower desire she wants to invest. I will not act so fast after like what she does, I need to check it properly. Sometimes I buy, but sometimes it end-up I did not buy anything. (Participant#12)	Participant's action that they take in support their decision making
…If I follow his suggestion, it's not so difficult to earn 5% to 10% profit. I will sell off when I make 8% to 10% gains. Once the shares drop more than 5%, I will just sell off and cut losses. (Participant#12)	Participant demonstrate self-control to restrain their desires and impulses
… when my remisier ask me to buy shares from his recommendations, I will ask my ex-boss first. He usually will give his comment before we come to conclusions, is it right timing to buy or not. (Participant#13)	Asking for peers' opinion to share experiences that can build concreate decisions
…share price move because of trading activities. Market movement rely on many factors; politics, economic, society, and technology. All this can affect overall market sentiment, and will give impact to my decisions. That is why in shares market, when you hear something good or bad, you must act accordingly. If the sentiment is good, I will buy. (Participant#13)	Demonstrate personal beliefs and thought lead to actions
…do you know when is your best entry point? Do you have your decision before entering? Even you do, you cannot get the price you want when the market is so volatile. You need sufficient info or news, does not matter it is useful or not. Only with sufficient information from the market can help you. When I have all the confirmations, then only I buy. (Participant#14)	Style of trading that attempts to capture short-to medium-term gains in shares market
… lock down is the most wonderful time to shopping my friend. All shares drop to rock bottom. That is the only place you can growth your investment portfolio. I hear a lot of noises when lock down, but I never border, just follow my instinct to buy shares. (Participant#14)	Leverage on events or situations that unusual or may have had an impact on shares market

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…last time when I get to know I will straight buy, never bother about any risk that I will face. But this time my investment strategy has totally changed, totally different from previous strategy. I started to build interest in those shares I interested in, and i will carefully analyze all the news before I buy. (Participant#15)	Actions about possible investment risks that is not justified by the facts at hand
…look at the indicator, it will help you a lot. Company needs to do their financial announcement every quarter, and when you hear anything negative about the company financial results, that is time for you to get off from the market. I take all these considerations before I sell off. (Participant#17)	Helps to ensure right criteria are identified and defined with all appropriate alternatives are considered
…so far, I am ok with my trading strategy, although sometimes I am making some losses because of "tips" (market rumor), but I am ok with it. Maybe for others, they are too keen to make profit in the market, but end up they loss their money, and I know most of them cannot take it. (Participant#17)	Essentially performed fixed and unchanging attributes and abilities
…if you make a right guess, you will make money. But if your guessing is against you, it will be bad. We need to be consistent, but that is hard when it comes into trading of share market. When I buy on rumor, I am just guessing on it. Winning probability for me is 50-50. (Participant#17)	Actions driven by expectation and longing for good return
…previously I investment blindly, I do not have any investment knowledge at all, and I trade based on "tips". As a result, I lost a lot of money. When I turn into 40s, I make a comeback. But this time I am more ready with my investment purposes. I had learned a lot about investment. At least I will study on the company before I buy. I think this is important for me to make my decision. (Participant#18)	Participant use this as guidelines to govern their behavior in a way which allows them to remain faithful to the tenets of their investment philosophy
… I can enter and exit from the market in very short time of period. Sometimes I do as much as 30 transactions per day, it does not matter. Sometimes you hear as many as 3-4 rumors in the same time, sometimes you cannot hear anything. (Participant#18)	Style of trading that attempts to capture short-to-medium term gains in shares market
…I believe everyone have their own way. No matter how attractive the news is, I do not easily buy shares if I do not feel good of that company. My instinct usually will give signal to me when to sell and not to hold anymore. So far, I feel good with my instinct. (Participant#18)	Participant demonstrate capacity to engage in interdependence with a sense of safety and wholeness that can be damaged
…my business closed during lock-down, shares market is the only place I can make money to survive. Luckily, I get few "tips" (market rumour) from my	Showing great motivation to overcome obstacle

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friends that makes some profits. I know I cannot rely on shares market for long, at least for now I can breathe for another few months. (Participant#18)	
…to have some portfolio in share market is part of my personal wealth management. You can see this has become important segment in investment bank. In other word, people are more concern on growing their money. Of course, I get influenced from my ex-colleague who work as personal banker. Usually, I buy from her recommendations. (Participant#18)	Identifying embedded quality in processes relationships
…that is the darkest moment in my life. I sold all my properties to cover losses. It took years for me to recover. When I look back, I can see how stupid am I trade share based on remisier's recommendations. I will not trust him anymore. (Participant#19)	Willingness from participant to respond fearlessly despite the anxiety
…I cannot take high risk, share market for me is a place to invest, not to gamble. You must have your own target and limit. Do not get distract by any market rumors out there. Yes, of course I buy some if I hear rumor related to blue-chips company. (Participant#19)	Ability to recognize what is the most comfortable position, and not react against or beyond boundaries
… in the 80s and 90s, you get news from your friends, newspaper, or business magazine. By the time you noticed, shares price already moved. Now is different, I can get all these news from my smart phone. I even can sell my shares on the spot. (Participant#20)	Able to grab opportunities from technological interventions
…ask yourself, what is the purpose you invest in share market? To make profit, right? No one want to lose money in their investment. This is rule of thumb. I do not care from where all these rumors come from, as long I make some money after I sell-off. (Participant#21)	Able to demonstrate extraordinary mindset when dealing with decisions making
…I think we cannot avoid the possibility of market crash again, but if you focus with shares with high liquidity, it will be easier to sell. Even tough if rumor says so, you must get yourself ready in any circumstances. (Participant#22)	Ability to tune in to participant's feelings, thoughts, and actions
…there is nothing that can shake my mind, no matter how attractive the news is I would not border it. I cannot take any risk, and I only look for stable companies to guaranteed return on my investment. (Participant#23)	Knowing how to prioritizes the preservation of capital over market returns
…now you have webinar, online classes to teach you on shares trading, also classes for technical charting. Although is not cheap, but there is a lot of people go to join these classes. But for me this is the platform they try to lobby on certain companies. Normally I	Able to access for reliable platform to allows self-educate and decisions

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would not buy on their recommendations. (Participant#23)	
…market sentiment changes every second in share market, traders like me needs market rumour to do trading, we need transaction volume. Transactions in share market need to become faster. If buy interest is higher than sell, market will go up, and I cannot let go this kind of opportunity. This is what traders want, I suppose? (Particpant#24)	Able to identify the greatest decision in the shorter time
…do not believe those rumor in blogs, they talk nonsense. It depends on how you look at it. For me blogs are the place for entertain, if you serious you will get burned. I get burned few times because of blogs. There are numbers of trading classes in town recently, especially during MCO when everybody cannot go out. Believe me, it going to be more people get burn. (Participant#24)	Urge of participant decision making process change as they progress through different stages and time
…no time for you to think much when market rumors come to you, anything just buy first, figure it out later. I need to find sufficient fund to settle my shares purchase in the final day. If not, I might be in big trouble as investment bank will force sell my shares. (Participant#24)	Acting from participant that led them to make sub-optimal decisions and undermine their decision in
…I put my money in few blocks, FD, mutual fund, expenses, and mutual funds. But if you want to enlarge your investment portfolio example like trading in "speculative" shares, you need additional fund to make it happen. So, by the time i hear something in the shares market, I am already there to make my move. (Participant#24)	Provide the opportunity to the participant to take control of his investment
… I know when you hear too many news, it is hard to make decision, but you need to be peace of mind when you trade in share market. You know what you want, where you stand, and when to get out from the market. I am not really care much, if I have sufficient money to buy, I will buy. (Participant#25)	Able to limits the extent of actions that feels comfortable
…expert always tell you their thoughts plus some suggestions to sell when the time has come, how accurate it is we never know. To be more responsible to your own investment, you need to allocate time to study more on the market. Learning is a long journey, and it is time consuming. All these processes you need go thought. (Participant#26)	Process of determining the most efficient investment strategy for participant, with the goal of maximizing their investment profit
…is my call, my own decision. When I feel like want to sell it off, I will do so. Whenever I feel like want to come back, I will make a comeback. (Participant# 26)	Grab any possibilities that participant can take advantage of

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…we have not seen such a liquid market for quite some time. In the past few years, we could hardly make fast and good profits within a short period of time as the sentiment was not good. This is the right time to go into the market, I buy a lot of shares, and I am happy with my current portfolio positions. (Participant#26)	Able to show essential quality determining intrinsic nature behavior
…he contacted me on daily basis, and I know that is his job to update market to his client. I am more prefer to hear US market conditions because for me Asia market are highly influenced by US market. If US market goes down, normally I will sell off my shares when our market open. (Participant#27)	Demonstrate passive and evidence-based investing, which seek on influencing factor to make decision
…Company needs to spread rumors to attract investor's attentions, and investor need rumor for trading. They need each other, and I do not think it will rise any ethical issues. Some more, after I sell off there will be no more issue, right? (Participant#27)	Participant demonstrate act or result of apprehending from the inner nature of things
…when expert say he get the news from his associates that company "A" is good and shares price will go up, then I will choose to believe and buy. The longer time I think, the longer I suffer the dilemma. But believe me, not all expert is true hearted in share market. (Participant#28)	Alternative values from expert to guide participants to make decisions
…remember what Warren Buffet say: "don't put all your eggs in one basket"? Invest in different portfolio can help protect against significant losses. Your wish list might be a lot, but not all companies you should invest in. I doubt you cannot afford fulfil all your wish list. So far by following his recommendations, my investment return quite steady. (Participant#28)	Able to show essential quality determining intrinsic nature behaviour
…I am heavily relying on my remisier. Almost every day i get "tips" (market rumor) from him. He will share "tips" to all his client, including me to buy on certain share with target selling price. Well, sometimes I do lose money because of "tips." Moral of my story is; do not 100% rely on rumor (Participant#29)	Uncertain opinion or a lack of confidence that might lead to adverse outcome
…from where do you think all these company rumors comes? It must be from reliable source or person. It is not often we can hear news from these companies. So, buy their company's shares before others hear it. Of course, I do so. If it does not have any impact, you just sell it off. (Participant#29)	Experiencing behavioral response that is greater than normal
…you must look for high credibility source. Listen to Bloomberg, CNBC, or refer to The Edge for local and Singapore market news. Do not refer to blogs and news posted in social media. That is the must for me	Able to gather useful information from reliable channel to make decisions

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before I buy. I have been fooled by their recommendations before, enough for me. (Participant#29)

Adapted from Gioia, Corley & Hamilton, (2012).

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Appendix 3a

Coding Process

Respondent 29 (Company Director)
Gender: Male
Investing Experience: 34 years
Date of Interview: 31/12/2021

Interviewer: Hi good morning <NAME>, such a pleasure for me finally can talk to you after such long period. Thanks again for accepting this interview. As I mentioned in our Whatsapp conversation, I am collecting data for my research titled "how rumor associate with investor decision making to buy or to sell", mainly focus on the process of decision making. Maybe before we go into details, perhaps you can briefly share your investment journey in shares market.

Participant: Thank you for inviting me to contribute in your research. I start to do shares trading since I was in secondary. That was about 30 over years back. You must be curious why I can get involved in such early age. Thanks to my father who taught me a lot in investment *(Influenced by parents).* Since then, I have a very strong interest in shares trading. The movement I see fluctuation in shares market makes my heart beat go fast and feel excited *(personal preference and interest).* Even I was in my college time I continue to trade until I back here to continue our family business.

Interviewer: Wow! I can see how passionate you are in shares trading. Do you mind to share how you do your investment decision?

Participant: You know, it all about process. From you young children to adult, from schooling to working. Some are good and some are not so good. Same to investment, it is all about the process. If we take the idea of investment same as like doing business, we need to go through a long journey to achieve the success. Then only you know the real meaning inside. Mostly of the investor still in the journey of the process, they are in the mist of acquiring as much knowledge as possible. In short, investors are still in the learning process *(continuous process).* Depend on the individual, some will be very fast, some will take longer time. There are two types in my investment decision making. Firstly, for those good stocks, where they are good in their fundamental, I bought it and keep it until today. And some I will not keep for long. It depends on situations *(clear investment objective).* I need something to make up my mind. For example, like technical analysis (charting). This technique will give you very simply and direct view to decide. Next maybe will look at their financial data. And, from the insider new, or so-called rumors. Insider rumor for me can be refer as quarterly results, any M&A news, any changes in management team or BOD. This all for me are very useful insider information *(trading technique as reference).*

Interviewer: Can you elaborate in detail what do you mean by insider information?

Participant: You see the word insider, meaning that only person inside the company know the news. Mostly the owner himself, top management like CFO, and those person in control the company *(in-depth explain the meaning).* Let me ask you something, those company with good quarterly result, who do you think will know first? Of course, the owner, follow by CFO, follow

by BOD, higher management, and close alliance to the owner *(in-depth the flow).* Market normally will react technical when this kind news is spread around *(give his opinion).* This is normal in any market in the world. Insider will react first when they get to know these rumors. Why? Because the share price is still cheap, right? When the news come out, the market will react, and they will sell off. We can link it to expectation theory. I give another example, M&A activities. Who will get involve in preparing all the paper work? The corporate finance, right? So, what I am trying to tell you is, beside the owner himself, corporate finance actually the important person who knows both companies' situations *(another personal opinion).* What is the level of both parties' negotiations stage? Even sometimes not even M&A announcement, in negotiation stage only the market will react. How it can react so fast? I am assured it must be from the people inside *(personal assumption).*

Interviewer: Can I use the word "leakage of information" from what you explain just now? If yes, from where it from?

Participant: From my experience, from the owner. I give you an example, a listed company chairman, who get very little annual remuneration fee, or director fee from his company, but make tones of income personally every year. Where do you think all these wealth come from? I can confirm it must be from leak info activities *(real experience).* This is human behavior. It is uncontrollable. This so-called game involves a lot of people, from top to bottom. It cannot be done by one person. The main concern is when the rumor come out. The information can happen today, but the rumor can come out after a year later *(further explain on flow of forming).* It can be when the rumor come out, they already in the third stage of negotiation. There are so many factors involved. I normally will not invest my money in this kind of company. Because from previous experience that making huge losses *(experience).* You must be very smart if you want to invest in these is very short. You can see any value in the reaction of the movement. Factors that involve in my decision making include: well, understanding of the target company's management. Because good or bad of the whole company controlled by those people. Next is environment. It might be macro or micro economic factor. For example, recently high demand in gloves and this will boost glove makers' company share price. The expectation of return must be high on the company result. Apply the theory in practically process, high demand, share price will go up. Another say is, if the industry looks good in future, it will direct or indirectly pull other companies in the same industry move in the same direction. So, for me if take into consideration of the factor in my investment decision, I will react the same *(explain his investment criteria in detail).* Back to glove industry just now, if the share price of the industry leader already moves, I will look at same industry company with cheaper share price that has not move yet to buy *(same industry matching).* Bookmaker theory. Expert say the share will go up, good to buy, then I will choose to buy. Yes, not all expert is true hearted in the market, I understand some with their own agenda when they release, they though *(third-party: expert).* For example, property stock, normally the valuation of the asset and contract on hand, how true is the asset and the contract value are? The owner needs third party to channel the information to investor to buy their share. For example, current share price is RM0.20. How can the owner push share price to RM0.50 in very short time of period? Of course, they need third party to play as whistle blower to channel good view to the investor. Their objective is how they can earn that RM0.30 profit from the market, they do not care what is the effect to another investor. Do not look at RM0.30 profit per every share, it will cost millions if in high volume *(helper to act as invincible hand).* For me in financial industry, it just like running you own business. The business that needed a lot of strategies. It does not matter how you run it, it is all about how you achieve your agenda and your goal *(clear on goal).* I give you a very extreme example, money game. People behind the scheme just need to

create a story to make people believe and put their money in. They never care who you are, their motive is to make money from the public. So, for me, I will invest in the company but not invest in the story or the rumors *(firm mindset).*

Interviewer: Do you think you rational enough in investing?

Participant: Yes, I consider myself rational in investing. This is basic rule in investing. Even in doing other business, you need to be rational in the sense that filtering information either it is solid info or not. You need to be rational enough to reach your final goal, earning profit. Of course, this also involve own personal creator *(rational vs irrational of investors' action).* Many investors in Malaysia losing money in share market we cannot easily access to get true data or reliable information *(access to get data).* This is totally different from efficient market like what happen in US. Investor can easily get US company useful data and information and forecast. In our country, many data and information are not transparent enough. For me, when investor invest wrongly because they did not get or equip with solid data. Their decision mostly from what they heard and do their decision *(lack of data affect decisions).* But recently many parties have come out to promote fundamental investing. This is where those regulators trying to push our market to make it more mature. And it is well accepted, especially educated investor. For those in more advance investing, they will look at another stage which is value investing *(enhance trading knowledge).* In short, I foresee Malaysian investor still a very long process to transform from fundamental investing to value investing. I believe now a days investor has learn a lot and not just blindly invest *(quantity investment more than quality investment).*

Interviewer: Do you know the term "Rumor"?

Participant: For me it has to some factor to move the rumors. No matter how good the company is, if it cannot create attention from the investor, no point. It only will become valuable to investor when it can attract their attention *(purpose why rumor).* Rumor not only in financial market, even in political environment. Rumor for me is unconfirmed information *(his explanation).* It depends on how you determine it. Because in our society there are too many rumors surrounding us, we do not know which one is true, which one is not. Again, it back to individual themselves to judge reliability of the information *(bias).* Human factor. Rich man will become richer. People like Robert Kuok, he needs information to make instant decisions *(level of make decision).* To get instant information, he needs to look for right person. In order to make a good decision, you need to get solid information. The percentage of success will be higher *(accuracy of getting information).* You see there is two dimensions of rumor, the good and the bad. And because of the uncertainty, majority choose to not believe it. For me, rumor is unreal information *(firm mindset).*

Interviewer: What is your view those rumors that become real news?

Participant: It depend on market reaction, what is the market reaction on the rumors? Positive or negative? Buyer will to buy or not? If buyer chose to believe market only can move *(clear on situation).* But before that, I think we must know who the market player is, and this is very important. For example, M&A rumor on Axiata and Digi, do you think normal retail investor could move the share price? Only those corporate investors like PNB or EPF, or other fund managers could make the change *(making assumption follow by explain).* So, I believe that the flow should be like that, from top management to corporate finance, to corporate investor, using mediator like remisier or market analysis transmit to retail investor *(third-party).* I can

separate rumor into few categories. Those blue chips normally will react to positive directions. This is because it involves so many parties and not easy to speculate. The size of the company also plays as major factor in consideration of the financial rumors. But when rumors on blue chips company to take over small cap company, it will give huge impact to the market. For example, Axiata to take over Sumatec which currently trading at RM0.20 per share *(what is rumor in few pieces of explanations).* Expectation from investor is different. What they need is something that can shaking the ground. Major concern of rumor on how long it can last is depend on the company itself. There longer time to turn rumors into news the lower interest desire of investor to chase. For example, for company to exercise M&A activity, it needs to take very long time until done deal. From here we can see only genuine investor will choose to keep investing and those speculative traders will not do so *(what investor want in their investment).*

Interviewer: Do you heard any financial rumors before?

Participant: Yes, example like Sumatec. As you know this is a speculative share. I get the news from my ex-boss; he is good friend of the company chairman. They love to play golf together. What makes me believe in that company is because all this so-called news came from my ex-boss. When he gives signal that share price will go up to certain level, do you choose to believe it? Of course, I will. The main concern here is the person who carry the story to you. And more miracle share price really goes up in front of you *(influencer, source of info).* So, at that time I choose to believe what he says, and yes share price really goes up to the mentioned level *(personal opportunity).* But as now, every investor must have discipline. I myself have set a target price and I know when I should sell off, take profit *(clear investment direction).* You must know how to do the basic analysis in order to do better decisions. This is for you to get ready by when you must off from the market. Be rational. Mostly what I heard in the market is about contract on hand, and this is the most I do not believe. It is all just in a paper, did not transform into revenue yet *(be rational).* Unless I personally know the company owner, then only I will believe and buy. Even if the rumor does not give any benefit to me, I will not blame the owner of the company because the flow is from the owner direct to me *(factor of source).* Most horrible is too many layers of transmission in the market until everybody knows and I don't think it is a good scenario *(transmission become more complex).* Back to basic, the expectation theory. When rumor already in the market, of course investor will expect reaction from the market. So, it is important to look back into market reaction whether it already move or not *(check on current situation).*

Interviewer: Hmm…very interesting sharing. It was surely ear opener to listen to your investment stories.

Participant: Sure, thank you.

Appendix 3b

Coding Process

Respondent 2
Gender: Female
Investing Experience: 22 years
Date of Interview: 4/12/2019

Interviewer: Hello, so as what we spoke about this before, the whole objective of my interview is for me to understand your decision making. This is to collect data for my research on how rumors associate with investor decision making process to buy or to sell. First of all, do you mind to share your investment journey in shares market?

Participant: Ok, thank you for having me. I shall divide my journey into few stages. Stages here what I mean is on my age. Different age has different investing strategies *(investment strategy change).* In my early stage when I get involve in investment, I would categorize myself in the group of irrational people. I am a charted accountant *(a professional),* but sadly at that moment I do not really get myself to analyses share that I want to buy. I rather listen to rumor, especially those rumor from my remisier *(rumor from third party).* Automatically whenever I want to buy share, I will ask him is there any good tips inside the market. In the 90s that is my investment strategy. So, during financial crisis in 1998, I get burn by suffering huge losses and I had decided to totally stop from investing activity *(lack of risk to return analysis).* I break for about 8 years with no any investment activity at all. So, when I turn into 40s, where about 13-14 years back, I make a comeback. But this time my investment strategy has changed, totally different from previous investment mind *(different age different strategy).* I started to build interest in those share I interested with. I will carefully analyze all the data that I get from investment bank, including analysis report, quarterly report, and annual report *(create self-persistence).* Normally those with buy call will attract my attention to invest. I will cut it into few parts *(strategy).* First, I will look at in which industry the share belongs to. If I think that particular industry has potential to grow, normally I will continue to observe. Because I am an accountant in practice, so I know how to analyses it *(leverage on her profession).* And also, I don't have much time to always stare at the share price, I will buy for long term investment. Long term here is refer to past five year's performance, their dividend yield and so on. For me I what I need in my investment is regular return consistently, especially dividend pay-out *(clear investment objective).* For example, their dividend pay-out for the last five years very consistent but not like some in certain circumstances they pay high dividend but only once in a blue moon *(expecting return).* I will avoid construction and aviation industry because low dividend pay-out and not consistent. Instead in put my money in fix deposit, why not I invest in those shares with dividend return *(strategy).* My benchmark is simple, any dividend yields higher than 5% is good to me. Long term potential grow company. This kind of company also has attracted my attention *(firm in her decision).* Of course, their balance sheet is very important too. This is to carefully looking into their cash flow, and avoid any high gearing. From there you can know whether the company has serious in doing business. If all these criteria fulfil, normally I will buy *(another firm decision).* But have to look at the share price also is it within my budget, if too high price how to buy, right? So, whenever I make purchases, I will just put there and let it grow. Even after that any news against it, I will not border *(very practical action).* I really like REIT (real estate investment trust), but not REIT in Malaysia. I had experienced REIT in

Malaysia with not clear investment directions. They can simply be mixed from shopping complex with offices building. I give you an example like what they have in Singapore. REIT in Singapore are more professional. They are more specific which industry they invest in. for example if shopping complex means just shopping complex. REIT also suit my investment strategy because the price not so volatile and all the unit holder concern is about the pay-out. Normally REIT will be cheaper than ordinary share, and pay-out are very consistent *(sector analysis and its pros and cons).* Every year I will take out my portfolio to do my own analysis. From there I will decide which share matured enough for me to sell off. Old company out, new company in *(refreshing investment portfolio).* I also attended some investment classes *(keep learning).* This also because of my personal interested in investment *(personal urge).* So, you can see actually now my investment strategy change from greedy to consistent. Totally take out selfish and greedy mind set from what I experience in my early stage of investment *(transformation of personal investment strategy).* My remisier still share market rumor to me, my friends also sometimes will take around if they have any market rumors, but I am totally out from the group of speculative or invest without proper checking *(transmission of rumor still happen).* Back to beginning, I think different stage has different investment strategy. At one time I also will ask myself, why as an accountant I will act irrationally. Until I get burned only, I realize that is not the proper way of investing *(regret with own previous actions).* Of course, my interested in investing give me energy to explore more knowledge to know more *(motivation).* Like recently, I have a class of students, where some of them are listed company's director. I also will go to look at their company's performance. They will not direct share any news with you, but from conversations and communications, I can guess what their company's next move is *(avoid herself from unethical actions).* I will not get involve normally; I don't like to get anything from so called insider news. Any rumor for me I will carefully to clarify it before I do any decision. It is all about opportunity too. As I mentioned, I am not the kind of people who always monitor at share market *(personal principle and stands).*

Interviewer: That is really interesting. Can you share what is your investment criteria?

Participant: It is all about basic fundamental checking. I am not use too technical analysis technique like charting or so on. Because of my profession, I am more into figure rather than chart pattern. I would treat it as case study to find the answer *(clear of own ability).* Of course, I also will look at background of the company, and that is a must for me *(firm with her decision).* Next is the share price level, is it too high or down bottom. Price range also in my consideration *(selection criteria).* I bought Public Bank for long time ago and I still holding it until today, even for the past few months the share price of Public Bank heavily hit by Covid-19, but I think it just matter of time for it to recover *(patience waiting for right timing).* As you aware, I'm not an active investor. So, for me, play safe in share market is very important element, and that is priority among others *(focus).* My first choice of course is those blue-chip counters *(priority industry).* Because those counters are safest, or maybe I can say lowest risk to invest? I also keen to invest in those company with all-time low in their trading *(selection criteria).* Usually, I will screen through those counters that in my radar, and if I feel the price is low enough for me then I will buy *(screening process).* Sometimes I also get info from my neighbor. He will advise me when is the right move to buy or to sell in the market *(third party).* For example, in short run, he will let me know at what price level I should sell off. He will let me know how long to how the share, for example two weeks, so my position should not longer than two weeks *(flow on how she makes decision).* When the time comes, I will sell, no greedy at all. I don't know about you, but I put my saving into few chunks. Mostly I put my money in FD, after minus out all the loans and expenses, not much left… (laugh) *(allocation of funds).* This is reality my friend, you need to have extra money to buy share. Investment direction and

intention are totally different. They punt into share market in split second and pull out after making very minimal profit. If the market good than ok, but if the market goes the other way, it is very dangerous *(intention vs reality, needs and wants).*

Interviewer: Do you know what is "rumor"? And what do you know about financial rumor?

Participant: For me rumor is something that has not verify. For example, like recently rumors related to our country political issues. Something that not officially announce from the right party that is rumor for me *(explain on term).* Anything that spread around, no matter from which channel, like Facebook or anything else, I choose not to believe *(her actions).* Uncertainty, don't know how true it is. This is my explanation, anything that I haven't verify all this are rumor. How I verify it? By doing basic checking of the company background and so on *(further explain).* Yes, I heard many rumors before, even recently one of my friends ask me to look at one of the Singapore listed company *(source and channel of rumor).* For me this is rumor. At the beginning I will try to ignore. This is to avoid me from what I had set as investment principles. But during I have free time, or when I recall back what he told me, I will seriously look into the company's performance *(her action when she hears rumor).* At that time, I look at the dividend yield and it is not so good. At the end, I decided not to buy that company's share. I don't want what happened before repeated again *(her final decision).* Let me share something with you. If you know the company name Pan Pacific. At that time, I get the rumor from my remisier, he also is my audit manager at that time. So, when this rumor comes to me, I choose to believe it *(her real-life story).* One of the factors is he is my audit manager; he is good in numbering *(influencing factor).* So, I buy a lot of this company shares *(her action).* At first yes, the share price goes up, but what happen later? Suspended until today. I suffer huge losses. But after that incident, I told myself I cannot blame him, it is me that I never verify the rumors *(outcome from her actions).* I admit that I am selfish and greedy at that time. When the share goes up, it will make people losing their mind. You must know where you standing point at should, what is your profit taking moment and when to cut lost *(investment goal).* Last time I will feel frustrated when I miss the boat, but now no more *(her felling).* For me financial rumor cannot last for long is nobody get involve in the process, meaning that if nobody buy, market will not react.

Interviewer: How do you judge reliability of any financial rumor you heard before?

Participant: Let us take example of my previous remisier, the audit manager. From his background, from number of years I know him, from his society, from the people he mingles around with, I am assured he can easily get access to any information from these people around him *(influencing factor-third party as transmission channel).* From there I convince myself that rumor from him is reliable *(her decisions).* Of course, this is at that time, now I believe in my investment principles. I usually get what I think useful information from The Edge or any other source *(reliable source).* But all that is just to gain additional investment directions. Because I also don't want to cross the territory that I build for many years. I will never touch on speculative companies *(firm with her principal).* You see, those financial channel like Bloomberg come out with a lot of financial news. I will take a look, but will not react so soon *(looking for confirmation).* For me all this are rumor. Anything that I am not confirm I will not take any action. But if related to the industry under my radar, I will take a look or pay more attention *(self-tolerance).* Now a days, I will not buy on any rumors.

Interviewer: How do you react on rumor?

Participant: No. once I take out greed from myself, I have no other desire to take any advantage on this kind of rumors *(transformation of attitude).* I give you an example, the COVID-19, what will you link with this virus? Medical supply related companies, right? Of course, the demand will increase, and everyone knows share price of glove maker will goes up. But I never react *(no actions).* My investment criteria as I share with you before, dividend yield, consistent grow, not rely on any ad-hoc factors, or political involvement *(firm stand on own strategy-focus).* Last time I still remember one of my friends tell me not to buy semi-conductor share. But for me it depends on the company direction whether they want to change or not. Example like Fuji or Kodak, from film to digital camera *(cross industry analysis).* The company that attracts my attention involve in doing semi-conductor for mobile phone. If the company conceive with my investment agenda, I will pay more attention on it. But if the industry does not perceive or match with my perception, I will ignore it *(very self-centric).* For me, right now my investment agenda does not count how much did I gain from the market, it is all about I make profit from judgement, which is doing proper analysis *(investment goal).* The satisfaction is totally different from how much you gain or make profit. So right now, my remisier less calling me to share market rumors because he knows that I will not simply make decision like others *(frequency of transmission; chances for rumor transmit).*

Interviewer: Do you have your own investment philosophy?

Participant: I do believe in 10 years circle in financial activities. From 1997 Asian Financial Crisis, 2008 Financial Crisis, and this year 2020 COVID-19 decease and oil price crisis. There must be people behind the crisis manipulating the market *(her own perceptions and opinion).* But when I relate the 10 years financial crisis with my investment portfolio, I actually will not take it into consideration at all. Previously yes, I will alert on it, but now no more *(her sentiment).* Remember in year 2008 when the crisis hit US, all banks and financial institutions suffer a lot. Even Lehman Brothers at that time file for bankruptcy. The sentiment indirectly impacts our country's financial institutions. Some of the banks in Malaysia, I mean the share price trading below market price *(macro and micro economic factor).* So, when I see this kind of situation happen, normally I will grab the opportunity *(actions).* Back to my investment principles, the industry in my radar or not. Market sentiment does not count whether you get involve directly or not, when it comes, it comes.

Interviewer: Thank you so much for your time.

Participant: You are welcome.

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Appendix 3c

Coding Process

Respondent 8
Gender: Male
Investing Experience: 6 years
Date of Interview: 6/3/2020

Interviewer: Good evening <NAME>, thanks for taking some time off from your busy schedule to attend this interview session. As we discuss earlier, this interview session part of data collecting for my research titled "What is rumor from the perspective of social reality and how rumor associate with investor decision making to buy or to sell". I believe you can be good data provider as you are long in shares investment.

Participant: Thank you. I hope I can help.

Interviewer: Maybe you want to briefly share your investment journey?

Participant: I grew up in KL. My journey in investment took a big turn during my first year in college when I made my first Ringgit Malaysia fifty thousand in my life. I learned a lot of investment techniques while in college until I completing my degree. I was on a fast track of my journey in shares trading. I think my biggest motivation and the most important thing was going to be my desire and willingness to constantly learn, and the hard work to back it up.

Interviewer: That is very impressive. Now, let us talk on current market situation. What you do during lockdown?

Participant: For me it's a norm for people get panic when they don't see future or feel uncertainty, especially when they face pandemic like Covid-19 with many unclear about the future *(fear of uncertainty).* This include no specific guideline, no procedures, what is next from the government to the people. So, when experience this kind of feeling of course to make them feel secure is to get their cash back *(action taken when uncertainty).* As you know, during MCO we can't go out, we can't do any social activities, things that can do are very limited, except work from home, doing house work or playing with your kids *(activities during lockdown).* So, with extra time…and perhaps with extra saving (nowhere to spend), they pour their money into share market. I did get myself involved in shares market at that time *(action during lockdown).* I did realize market actually sudden drop at that time, if I'm not mistaken around 18-20/3 many companies get margin call from the banks *(aware of situation).* Many listed company's shareholder pledges their shareholding to the bank, and most of the selloff actually came from the bank. So, the bank needs to play their role by selling off those shares pledged, to level the margin value of those listed companies' shareholders *(explain on why share price drop).* Therefore, their shareholding indirectly drastically diluted at that moment. Share market at that time selling pressure greater than buying, and it wouldn't move in a single way. Got selling must be got people buying. But the question is who's buying at that time *(bank sell, who buying?)?* Definitely there are people out there who move the other way round again the movement of the market. So, I think these group of people actually is from retail investor, and I believe it's in a very large number of them *(retail investor buy at that moment).* Bear in

mind, heavy selloff from the banks, cut loss also from the banks. So that is the best opportunity for retail investor to buy because ninety over percent of share price at that time is far below the true value of the share itself *(retail investor buy because of good bargain).* From what I know, friends around me more to buy at that time. Market experience heavy over sold at that time, you can't see this kind of phenomenon happen many times in your life *(lifetime opportunity).* I believe even those people, what I mean those not active in share market also start to buy *(group of new investors).* In other word is the opportunity is there for you to grab, why not *(good timing)?* My remisier told me during MCO the number of new account opening is all time high for him. Sudden spike in numbers of new account opening shows great flow of hot money pouring into our share market *(market sentiment change).* They see opportunity to buy in lower price. I think government has play their role also. By announcing contingency plan to help the people during MCO has given huge impact in share market. It's clearly has created hot money to the people, besides deferments to the loan borrower no need to pay in sex month time *(external influencing factor).* As what I know so far, there is no 10 billion transactions per day before in our share market, but during MCO may transaction days has recorded more than 10 billion transactions per day.

Interviewer: What is your position during MCO?

Participant: One way, I only buy (action). Why buy? Those listed companies have asset, healthy in their balance sheet, good cash flow, in a nut shell, it's a good company *(explain on his action).* The reason why share price fall is unpredictable factor, which is Covid-19. So, if there is a good bargain, why not *(opportunity)?* When heavy selling happens, what will happen next? When share price drop to bottom, what will happen next? It will rebound right? So, I believe I had made correct decisions to buy at that time *(expectation from his investment).* I'm happy with the return so far. I back to the market after the positive sentiment seen in the share market, and that is around early April, if I'm not mistaken. I made about 20% gain on average in the past few months, mostly from O&G counters *(outcome from his action).* During the MCO, I focus on day trade because I am for short term gains. What I would do is focus on 5 to 10 counters and keep monitoring their share price movement *(his position).* Currently, I am more into sector I am familiar with *(his preference).* Some stocks have great investor participation. When there is high volume, you have more opportunities to buy and sell. It is not so difficult to earn 5% to 10% profit. I will sell when I make 8% to 10% gains. Once the shares drop more than 5%, I will sell and cut losses *(his investment principle).* So far, I am making profit with these strategies. I did get advice from dome of the professional analyst on their view during MCO, and they give me neutral feedback *(advice from third party).* At that time for example like Genting Berhad and Resort World, share price drop to RM1.80 and RM1.90 respectively. That is super crazy, I mean it never happen to Genting share price before in the history. But even those so-called professional analysts not dare to buy, simply to say at the early stage of MCO nobody can assure what will happen next *(even professional not dare to make decision).* That is the best time for discounted price shopping in share market *(timing).* Another factor makes me to buy is (*external factor).* It takes short time for foreign market to rebound and it happen same way to our share market. US market rebound not even in one week after sharp fall in March. When the market until bottoms the only way after that is rebound and all way up. Another factor I think is very important for me to make my decision is our government's intentions. From every plan PM had announced, I can see how serious government try to stabilize our country's economic and financial sector. And I think I get it right, by end of March, you can see trading volume in share market become bigger and bigger in daily trading. This has shown hot money pour into share market by getting help from government's hand *(macro & micro).*

Interviewer: How you segregate your investment portfolio?

Participant: I go by category. I invest in five different sectors, and of course I also will put factor of consideration whenever I want to buy those shares *(investment strategy).* Most important is the company's balance sheet and project on hand. Valuation of the company also important. You must know your stand in investment. How much your profit return in percentage needed? What is your cut loss point? All this are very important *(clear of investment objectives and directions).* I don't invest blindly. I saw inflow of hot money into share market. Trading volume tremendous high every day. Maybe…I don't know… but everyone knows that share market for somebody looks like casino. So, when real casino or gambling activities cannot be performed, those suppose not a real investor in share market suddenly move their direction and put their money into share market *(his opinion).* This chunk also helps Bursa trading activity become high volume. I don't do any forecast at that time. I give myself target price to sell off. But since the price keep going up, I just let it fly… (laugh) *(patience).* Until now I don't see any sign of market will crash for second time in this year. But as you know, the pandemic has no vaccine yet, anything could happen *(market risk).*

Interviewer: How do you get signal to enter or exit the market?

Participant: I don't buy right now because I feel prices are a bit too high. I will wait for positive signal before I enter the market again. *(Eventually most of the time signal came from remisier).* As this is part of their duty to give market update to their customers, I think from there they gather and circulate all the information to us *(third party).* When you see sudden heavy buy or heavy sell volume, and the price sudden spike up or sudden tumble down with no reason *(market sentiment).* Secondly is when the technical charting shows some indicator that are below certain point, it means the share are heavily oversold or overbought *(helps from technology).* We have not seen such a liquid market for quite some time. In the past few years, we could hardly make fast and good profits within a short period of time as the sentiment wasn't good *(market sentiment).* Previously, when a stock dropped, it took a longer time to pick up, but now, due to high trading volume, you can see stock prices easily moving up *(market sentiment).* The six-month loan moratorium is one of the reason people active in share market. More people willing to go into share market to buy some shares in view of the slow economic outlook. For those who don't have much cash on hand, short term trading is a good option *(impact from government's decision).*

Interviewer: What are your expectations on current share market situation?

Participant: I think we cannot avoid the possibility of market correction, but as long as you go with shares with high liquidity, it will be easier to buy and sell. You have to take profit when you make some gains *(action).* I don't trade too many counters at one time. Usually, I have three to five counters in my portfolio. I am not saying we can fully rely on technical charts, but they do provide good indicator on how the shares may move, especially when you do short-to medium- term trading *(facilitate of technology).* It just like a balloon, if you keep pumping-in the air pressure it going to burst one day. Anything goes up will come down, just matter of time. I haven't heard anything from my remisier yet, or any of my friends *(need confirmation from third party),* as everyone now seems are still in enjoy mood of trading in share market.

Interviewer: What are your trading strategies? Buy or more on sell? Why buy? Why sell?

Participant: Fundamentals are just one of the factors affecting share price movements. Most of the time, they are affected by market sentiment. You have to look at the buying momentum *(analysis on market).* Then you know the support and resistance level for the stocks, so that you wouldn't buy at high prices *(clear on position).* It is important to study the shares that you interested in, including the market capitalization and the company's cash flow and profitability *(knowledge).* For short term strategies, I will buy shares that have dropped substantially. Then I sell the next day. When there is a huge correction, it will be followed by technical rebound, so you can make some gains from that. Over the long term, I will buy stocks with growth potential and below their average prices. It is important to conserve cash and buy when a correction comes *(his analysis and his action).* Currently more on buy, the portion is about 80-20. The main reason why sell less is I believe the price will move up further as we are now experienced very high trading volume every day *(own trading strategy).* Technically in share trading Bursa will act as clearing house to settle the trading between buyer and seller. In brief explanation, every trading day we call it T-day. Last day for buyer to settle their share purchase is on T+3 days. If they do not exercise those share that they purchase, the participate members (investment bank or securities firm) will force sell it on T+4 days afternoon *(market activity).* When participate members perform force selling, they will not choose any good price to sell but will just throw in the market as long there are buyer willing to buy at that moment. This is one of the reasons share price will sudden drop with no reasons *(his opinion).*

Interviewer: How do you consider yourself as investor?

Participant: I would prefer to categorize myself as low risk investor *(position).* Why I say so? All my investment is from my hard earn money, and I know I should make the best decision in every move I made *(rational investing).* So, I spend a lot of time to study on share market, learn the technical charting, and learn how to read annual report. All this is a must to play safe in share market now a days *(investment knowledge).* Yes, I know there are many contras player who take granted in our market, for me that is very risky. Once market drop you can see a lot of people jump from high floor. I don't wish to see what happened in 1998, 2003, and 2008 repeat again *(his opinion on risk and return).* I don't know who are they, but from what I know is they are people who has intention to "trade" in share market just for excitement, not really keen to the word "invest" *(investment objective).* They usually buy and sell frequently in short time of period, maybe few times in an hour or in a day. In the other word, I would say they are not a genuine investor, just a punter *(investor character).*

Interviewer: Thank you so much, and thank you for your time.

Participant: You are welcome.

Appendix 4

Data Structure in Tabular Form

Aggregate Dimension	**Second-Order-Themes**	**First-Order-Terms**	**Interview Participants**
Anticipated Outcome	Environmental Sensitivity	Measure of a financial value reaction to changes in underlying factors. This action helps participants isolating risk, hedging risk, and explaining profit & loss	…when I hear any rumor, I will carefully investigate the company cash flow, and avoid any high gearing. From there i can know whether the company has serious in doing business, in other words, is it a good bargain for your investment. (Participant#2)
		Basis actions that participant seeks for some investment recommendations towards their investment	…he is so long active in shares market, and I believe with his experience, his recommendations will help towards winning side. Almost all my investment portfolio is from his recommendations. (Participant#3)
		The magnitude of participant's reaction to changes in underlying factors, most often in terms of response to the process of decision making	…when the news comes to me, I will look on it. If the company conceive with my investment agenda, certainly, I will pay more attentions on it. Yes, most probably I will buy. But if the company business directions against

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			my principle, I will ignore it. (Participant#16)
	Investment Strategy	Set of goals that determines participant's financial portfolio	…I will target industries poised to grow for the next 5-10 years such as technology stocks and digital banking. I heard that Bank Negara going to announce which company going to get their digital banking license soon. So, it is time to buy those company's shares. (Participant#25)
		Objective that is set by participant and typically is set to mature at a future time	…I really like REITs (Real Estate Investment Trust), but not REITs in Malaysia. REITs in Malaysia do not have clear investment directions. My focus is on REITs in Singapore. It is more specific and professional. I noticed from digital paper saying that REITs in Malaysia going to have hard time in coming 2-3 years. So, it is time to clear my positions. (Participant#2)
		Participant have knowledge of,	…they talk about 10 years circle in

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		conscious of, or have a perception of an event and are very aware of circumstances	financial crisis. 1997 Asian Financial Crisis, 2008 Financial Crisis, and 2020 COVID-19. I think better I sell off all my shares before it happens again. (Participant#22)
		Actions about possible investment risks that is not justified by the facts at hand	…last time when I get to know I will straight buy, never bother about any risk that I will faced. But this time my investment strategy has totally changed, totally different from previous strategy. I started to build interest in those shares I interested in, and i will carefully analyze all the news before I buy. (Participant#15)
		Degree of participant's willingness to endure within their portfolio	…because of my profession, I am more into numbers rather than charting, and I will do fundamental checking. There is no short cut in my decision making. Any market news comes to me I will carefully check their balance sheet and company background before i

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			enter the market. (Participant#2)
	Investment Knowledge	Participant use this as guidelines to govern their behavior in a way which allows them to remain faithful to the tenets of their investment philosophy	…previously I investment blindly, I do not have any investment knowledge at all, and I trade based on "tips". As a result, I lost a lot of money. When I turn into 40s, I make a comeback. But this time I am more ready with my investment purposes. I had learned a lot about investment. At least I will study on the company before I buy. I think this is important for me to make my decision. (Participant#18)
		Decided to do accumulation process by averaging up prices of all the shares purchases	…all my investment is from my hard earn money, and I know I should make the best decision in every move I made. I know my investment cannot last long if I solely depend on rumor. So, for now before I buy shares, I will spend a lot of time to study on the market. When shares price drop, I will buy some to average back my initial purchases. (Participant#10)

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		Process of determining the most efficient investment strategy for participant, with the goal of maximizing their investment profit	… expert always tell you their thoughts plus some suggestions to sell when the time has come, how accurate it is we never know. To be more responsible to your own investment, you need to allocate time to study more on the market. Learning is a long journey, and it is time consuming. All these processes you need go thought. (Participant#26)
		Urge of participant decision making process change as they progress through different stages and time	…do not believe those rumor in blogs, they talk nonsense. It depends on how you look at it. For me blogs are the place for entertain, if you serious you will get burned. I get burned few times because of blogs. There are numbers of trading classes in town recently, especially during MCO when everybody cannot go out. Believe me, it going to be more people get burn. (Participant#24)
	Social Approach	Uncertain opinion or a lack of confidence that might lead to adverse outcome	…I am heavily relying on my remisier. Almost every day i get

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			"tips" (market rumor) from him. He will share "tips" to all his client, including me to buy on certain share with target selling price. Well, sometimes I do lose money because of "tips." Moral of my story is; do not 100% rely on rumor (Participant#29)
		Alternative values from expert to guide participants to make decisions	…when expert say he get the news from his associates that company "A" is good and shares price will go up, then I will choose to believe and buy. The longer time I think, the longer I suffer the dilemma. But believe me, not all expert is true hearted in share market. (Participant#28)
		Helps to ensure right criteria are identified and defined with all appropriate alternatives are considered	…look at the indicator, it will help you a lot. Company needs to do their financial announcement every quarter, and when you hear anything negative about the company financial results, that is time for you to get off from the market. I take all these

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			considerations before I sell off. (Participant#17)
		Older investors make more conservative investment decisions and their decisions reflect greater knowledge about investing	…I am 61 years old and I am still in the learning process trading shares. Do not limit yourself and give excuse because your age. If you want to know something, you must learn how to get the answer. Always ask people around you if you want to know. But do not just listen to people without checking the source. Refer to newspaper at least to confirm before you buy any shares. (Participant#10)
	Situation Attentive	Asking for peers' opinion to share experiences that can build concreate decisions	…when my remisier ask me to buy shares from his recommendations, I will ask my ex-boss first. He usually will give his comment before we come to conclusions, is it right timing to buy or not. (Participant#13)
		Leverage on events or situations that unusual or may have had an impact on shares market	…lock down is the most wonderful time to shopping my friend. All shares drop to rock bottom. That is the only place you can

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			growth your investment portfolio. I hear a lot of noises when lock down, but I never border, just follow my instinct to buy shares. (Participant#14)
		Style of trading that attempts to capture short-to medium-term gains in shares market	…I can enter and exit from the market in very short time of period. Sometimes I do as much as 30 transactions per day, it does not matter. Sometimes you hear as many as 3-4 rumors in the same time, sometimes you cannot hear anything. (Participant#18)
		Grab any possibilities that participant can take advantage of	…is my call, my own decision. When I feel like want to sell it off, I will do so. Whenever I feel like want to come back, I will make a comeback. (Participant# 26)
Aggregate Dimension	**Second-Order-Themes**	**First-Order-Terms**	**Interview Participants**
Subjective Probability	Investor Attributes	Bias occurs when participant in selection process	…my investment criteria as I share with you before: dividend yield, consistent grow, not rely on any ad-hoc factors, or political involvement. If I found any rumor of those company's

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			meet the criteria, I will buy it. But if it does not meet the criterial, I will ignore. (Participant#29)
		Stubbornly holding to one's own opinion	…I am kind of person not easy to get influence by any situation. You may share news or rumors to me, but my stand is very firm. My ideology in investment solely relies on my own decision. (Participant#6)
		Participant able to demonstrate strong self-discipline in action	…if you do not perform due diligence when you buy shares, your investment could be in high risk. What is the point if you do investment just based on rumors? I will never do that. Before I making any investments, i always do my own checking to make sure my investment will be a wise one. (Participant#3)
		Ability to recognize what is the most comfortable position, and not react against or beyond boundaries	…I cannot take high risk, share market for me is a place to invest, not to gamble. You must have your own target and limit. Do not get distract by any

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			market rumors out there. Yes, of course I buy some if I hear rumor related to blue-chips company. (Participant#19)
	Investor Character	Demonstrate passive and evidence-based investing, which seek on influencing factor to make decision	…he contacted me on daily basis, and I know that is his job to update market to his client. I am more prefer to hear US market conditions because for me Asia market are highly influenced by US market. If US market goes down, normally I will sell off my shares when our market open. (Participant#27)
		Setting the applicable framework as golden rules in investment	…I love numbers since I was young. This has led me to become an accountant when I grow up. Numbers have patterns, and patterns fascinate people. I think therefore I do not believe in rumors so much. It is a big NO for me buy on rumor. (Participant#2)
		Provide the opportunity to the participant to take control of his investment	…I put my money in few blocks, FD, mutual fund, expenses, and mutual funds. But if you want to enlarge

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			your investment portfolio example like trading in "speculative" shares, you need additional fund to make it happen. So, by the time i hear something in the shares market, I am already there to make my move. (Participant#24)
		Patience and discipline are a virtue that will benefit participant	…not every day is a good day, you need to wait for the right timing. If I missed out, I will look for other company in the same sector. Normally its movement of share price will influence other companies in the same sector. Still, I will buy, just wait for right timing. (Participant#11)
		Knowing how to prioritizes the preservation of capital over market returns	…there is nothing that can shake my mind, no matter how attractive the news is I would not border it. I cannot take any risk, and I only look for stable companies to guaranteed return on my investment. (Participant#23)
	Investor Emotions	Acting from participant that led them to make sub-optimal decisions	…no time for you to think much when market rumors come to you, anything just

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		and undermine their decision in the shares market	buy first, figure it out later. I need to find sufficient fund to settle my shares purchase in the final day. If not, I might be in big trouble as investment bank will force sell my shares. (Participant#24)
		Participant demonstrate capacity to engage in interdependence with a sense of safety and wholeness that can be damaged	…I believe everyone have their own way. No matter how attractive the news is, I do not easily buy shares if I don't feel good of that company. My instinct usually will give signal to me when to sell and not to hold anymore. So far, I feel good with my instinct. (Participant#18)
		One party in a set of process has a direct influence on another party	…why so headache? I can just follow his recommendations. You are not expert, but they are. So, just listen to expert. My trading account is under him for years, I trusted him. When he says buy, I will buy. (Participant#12)
		Willingness from participant to respond fearlessly despite the anxiety	…that is the darkest moment in my life. I sold all my properties to cover losses. It took years for me to recover.

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			When I look back, I can see how stupid am I trade share based on remisier's recommendations. I will not trust him anymore. (Participant#19)
		Expressing very happy and proud because of such an achievement	…we have not seen such a liquid market for quite some time. In the past few years, we could hardly make fast and good profits within a short period of time as the sentiment was not good. This is the right time to go into the market, I buy a lot of shares, and I am happy with my current portfolio positions. (Participant#26)
	Investor Behavior	Able to show essential quality determining intrinsic nature behavior	…remember what Warren Buffet say: "don't put all your eggs in one basket"? Invest in different portfolio can help protect against significant losses. Your wish list might be a lot, but not all companies you should invest in. I doubt you cannot afford fulfil all your wish list. So far by following his recommendations, my investment

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			return quite steady. (Participant#28)
		Experiencing behavioral response that is greater than normal	…from where do you think all these company rumors comes? It must be from reliable source or person. It is not often we can hear news from these companies. So, buy their company's shares before others hear it. Of course, I do so. If it does not have any impact, you just sell it off. (Participant#29)
		Participant demonstrate self-control to restrain their desires and impulses	… If I follow his suggestion, it is not so difficult to earn 5% to 10% profit. I will sell off when I make 8% to 10% gains. Once the shares drop more than 5%, I will just sell off and cut losses. (Participant#12)
		Ability to tune in to participant's feelings, thoughts, and actions	…I think we cannot avoid the possibility of market crash again, but if you focus with shares with high liquidity, it will be easier to sell. Even tough if rumor says so, you must get yourself ready in any circumstances. (Participant#22)

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Aggregate Dimension	Second-Order-Themes	First-Order-Terms	Interview Participants
External Factors	Influences from External Parties	Participant able to identify the correct macro and micro economic forecast	…It takes short time for foreign market to rebound and it happen same way to our share market. US market rebound not even in one week after sharp fall in March 2021. This has given huge impact to our share market. They even say in TV market is going to be better this year. This has given me huge confidence in our market. For sure I will wait for that to sell my shares. (Participant#5)
		Determinant value of information by its importance to the decision maker	…thanks to his "tips" (market rumor) ask me to buy companies that related to CPO (crude palm oil). Raises of CPO price helps me to make more than 20% profit gain on average, mainly from oil and gas companies. (Participant#6)
		Participant demonstrate act or result of apprehending from the inner nature of things	… Company needs to spread rumors to attract investor's attentions, and investor need rumor for trading. They

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			need each other, and I do not think it will rise any ethical issues. Some more, after I sell off there will be no more issue, right? (Participant#27)
		Leveraging on evolvement of technology for faster decisions and actions	…If you talking about 10 years back yes, it is true people gossip and spread rumors in coffee shop. Although the power of spreading rumor is limited but they still can actively trade. Now everything has changed, everyone using smart phone, even old uncle aunty also knows how to use smartphone to trade. Same to me, I buy shares using smartphone now a days. (Participant#8)
	Evolution of Socio-Technology	Able to gather useful information from reliable channel to make decisions	…you must look for high credibility source. Listen to Bloomberg, CNBC, or refer to The Edge for local and Singapore market news. Do not refer to blogs and news posted in social media. That is the must for me before I buy. I have been fooled by their recommendations

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			before, enough for me. (Participant#29)
		Able to access for reliable platform to allows self-educate and decisions	…now you have webinar, online classes to teach you on shares trading, also classes for technical charting. Although is not cheap, but there is a lot of people go to join these classes. But for me this is the platform they try to lobby on certain companies. Normally I would not buy on their recommendations. (Participant#23)
		Able to grab opportunities from technological interventions	…in the 80s and 90s, you get news from your friends, newspaper, or business magazine. By the time you noticed, shares price already moved. Now is different, I can get all these news from my smart phone. I even can sell my shares on the spot. (Participant#20)
		Able to identify the greatest decision in the shorter time	…market sentiment changes every second in share market, traders like me needs market rumor to do trading, we need transaction volume. Transactions in

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			share market need to become faster. If buy interest is higher than sell, market will go up, and I cannot let go this kind of opportunity. This is what traders want, I suppose? (Particpant#24)
	Social Relevance	Participant's action that they take in support their decision making	…she says the longer time to turn rumor into news, the lower desire she wants to invest. I will not act so fast after like what she does, I need to check it properly. Sometimes I buy, but sometimes it end-up I did not buy anything. (Participant#12)
		Demonstrate personal beliefs and thought lead to actions	…shares price move because of trading activities. Market movement rely on many factors; politics, economic, society, and technology. All this can affect overall market sentiment, and will give impact to my decisions. That is why in shares market, when you hear something good or bad, you must act accordingly. If the sentiment is good, I

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			will buy. (Participant#13)
		Able to identify sources and strategy involves to make decisions	…do you know when is your best entry point? Do you have your decision before entering? Even you do, you cannot get the price you want when the market is so volatile. You need sufficient info or news, does not matter it is useful or not. Only with sufficient information from the market can help you. When I have all the confirmations, then only I buy. (Participant#14)
Aggregate Dimension	**Second-Order-Themes**	**First-Order-Terms**	**Interview Participants**
Fundamental Principles	Embrace Anticipation	Showing great motivation to overcome obstacle	…my business closed during lock-down, shares market is the only place I can make money to survive. Luckily, I get few "tips" (market rumor) from my friends that makes some profits. I know I cannot rely on shares market for long, at least for now I can breathe for another few months. (Participant#18)
		Able to make decision on beliefs	…it just like a balloon, if you keep pumping-in the air

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			pressure, it going to burst one day. Anything goes up will come down, just matter of time. Same goes to market info, if too many comes to you, certainly it can make you lose focus. From there I will choose the best timing to clear my position. (Participant#10)
		Actions driven by expectation and longing for good return	…if you make a right guess, you will make money. But if your guessing is against you, it will be bad. We need to be consistent, but that is hard when it comes into trading of share market. When I buy on rumor, I am just guessing on it. Winning probability for me is 50-50. (Participant#17)
	Overcome Discouragement	Able to act in anticipating about changes and needs	…I will buy first before I share out the news, I heard with them. I will be happy if they make money, but if they do not, I will feel sorry. But is does not stop me to keep continue sharing news to them. (Participant#2)

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		Participant show ability to concentrate on critical environment	…people say this pandemic going to be long. Indeed, people get panic when they do not see future or feel uncertainty, especially when they face pandemic like Covid-19 with many unclear about the future. I sell off all my shares during lock-down and I suffer huge loses. That is normal in shares market. (Participant#10)
		Willingness to take practical action to deal with a situation	…I think when these "gurus" recommend shares to invest, they must be having some interest. This also can be one of the channels he can spread rumours. Be smart, you cannot follow exactly what they say. I will filter before I buy. If it is a good company, then I will buy some. (Participant#11)
	Priority Mindset	Essentially performed fixed and unchanging attributes and abilities	…so far, I am ok with my trading strategy, although sometimes I am making some losses because of "tips" (market rumour), but I am ok with it. Maybe for others, they are too keen to

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			make profit in the market, but end up they loss their money, and I know most of them cannot take it. (Participant#17)
		Identifying embedded quality in processes relationships	…to have some portfolio in share market is part of my personal wealth management. You can see this has become important segment in investment bank. In other word, people are more concern on growing their money. Of course, I get influenced from my ex-colleague who work as personal banker. Usually, I buy from her recommendations. (Participant#18)
		Able to demonstrate extraordinary mindset when dealing with decisions making	…ask yourself, what is the purpose you invest in share market? To make profit, right? No one want to lose money in their investment. This is rule of thumb. I do not care from where all these rumours come from, as long I make some money after I sell-off. (Participant#21)

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		Able to limits the extent of actions that feels comfortable	…I know when you hear too many news, it is hard to make decision, but you need to be peace of mind when you trade in share market. You know what you want, where you stand, and when to get out from the market. I am not really care much, if I have sufficient money to buy, I will buy. (Participant#25)

Adapted from Gioia, Corley & Hamilton, (2012).

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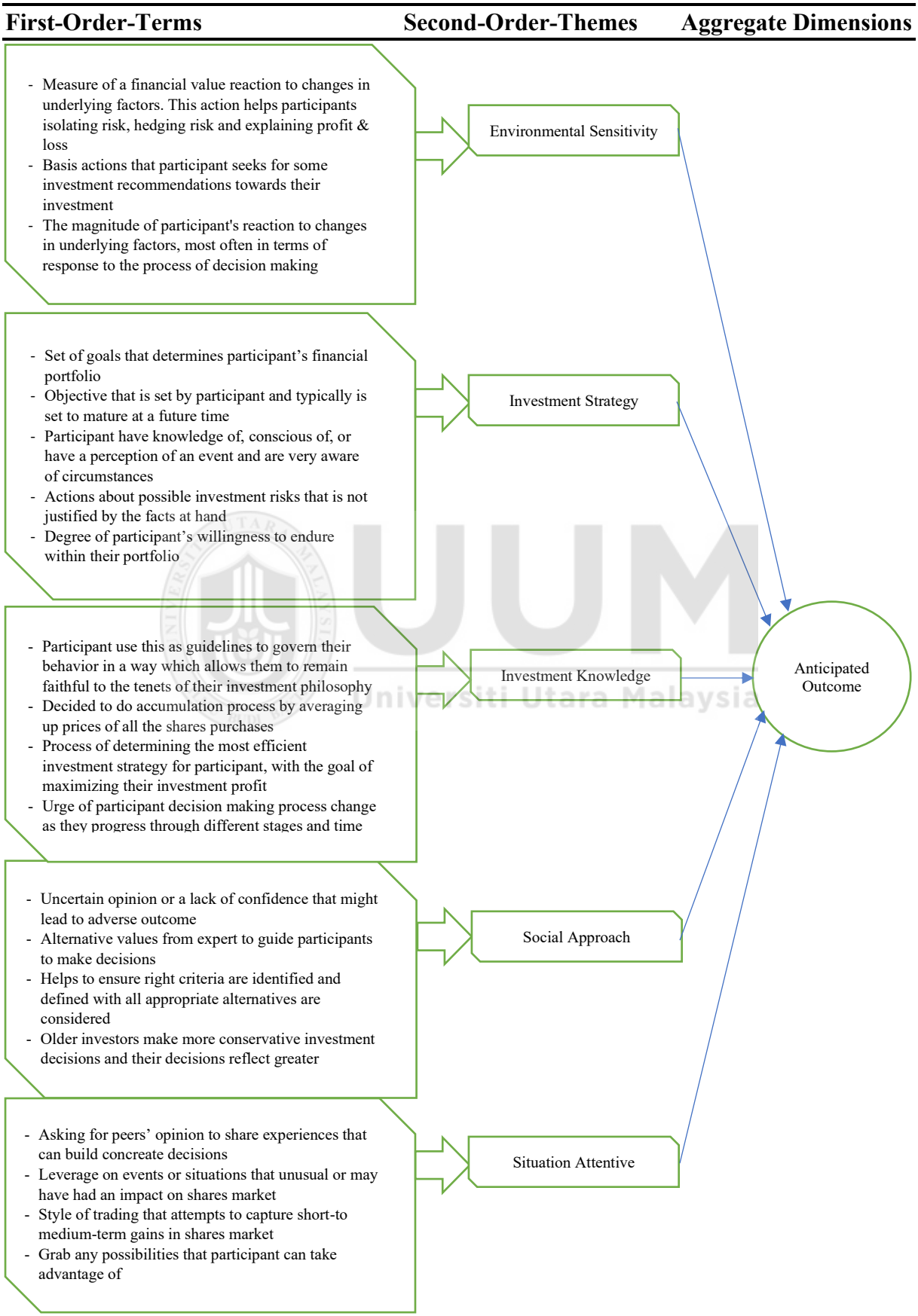
Appendix 5

Data Structure



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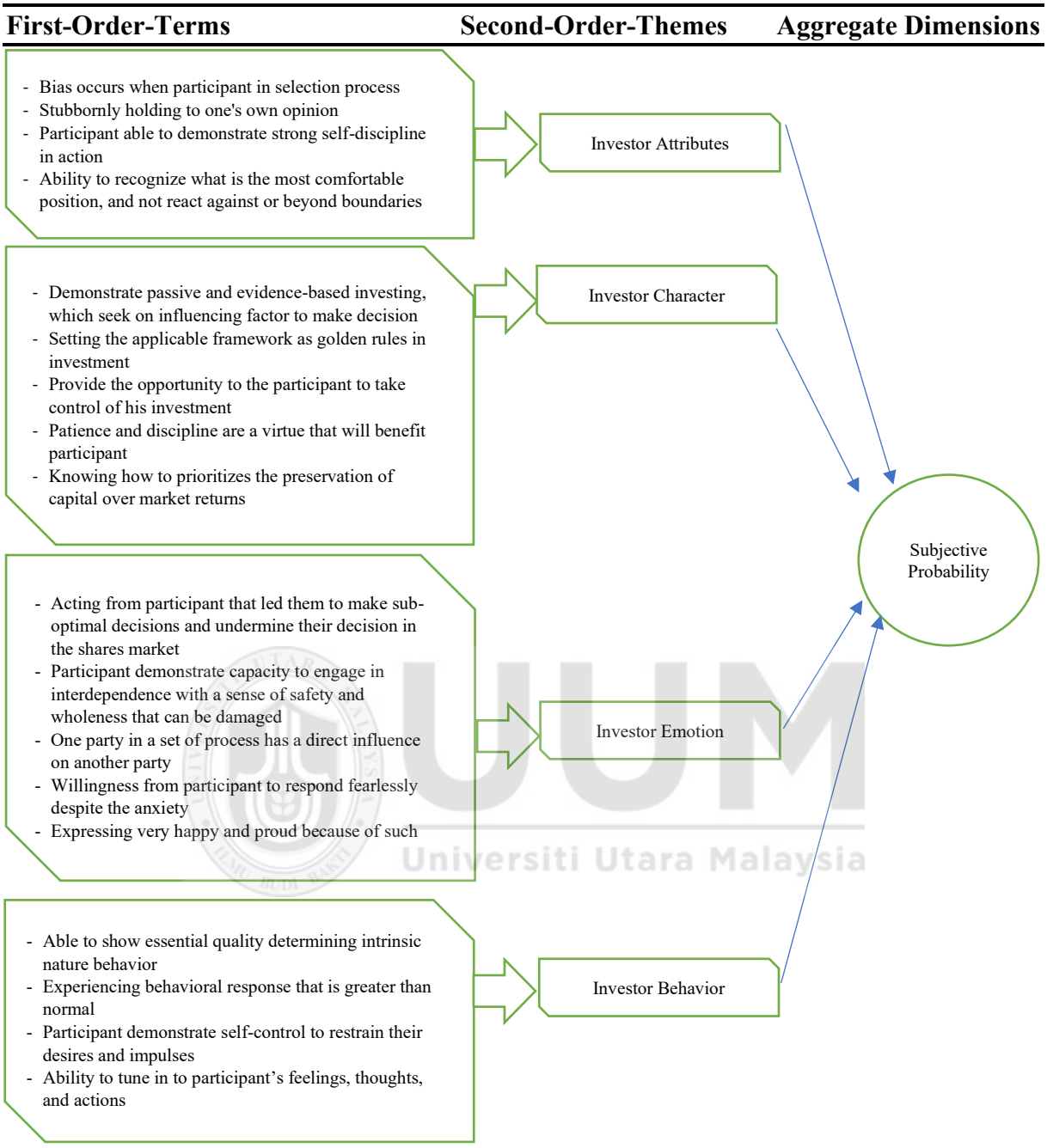
Data Structure



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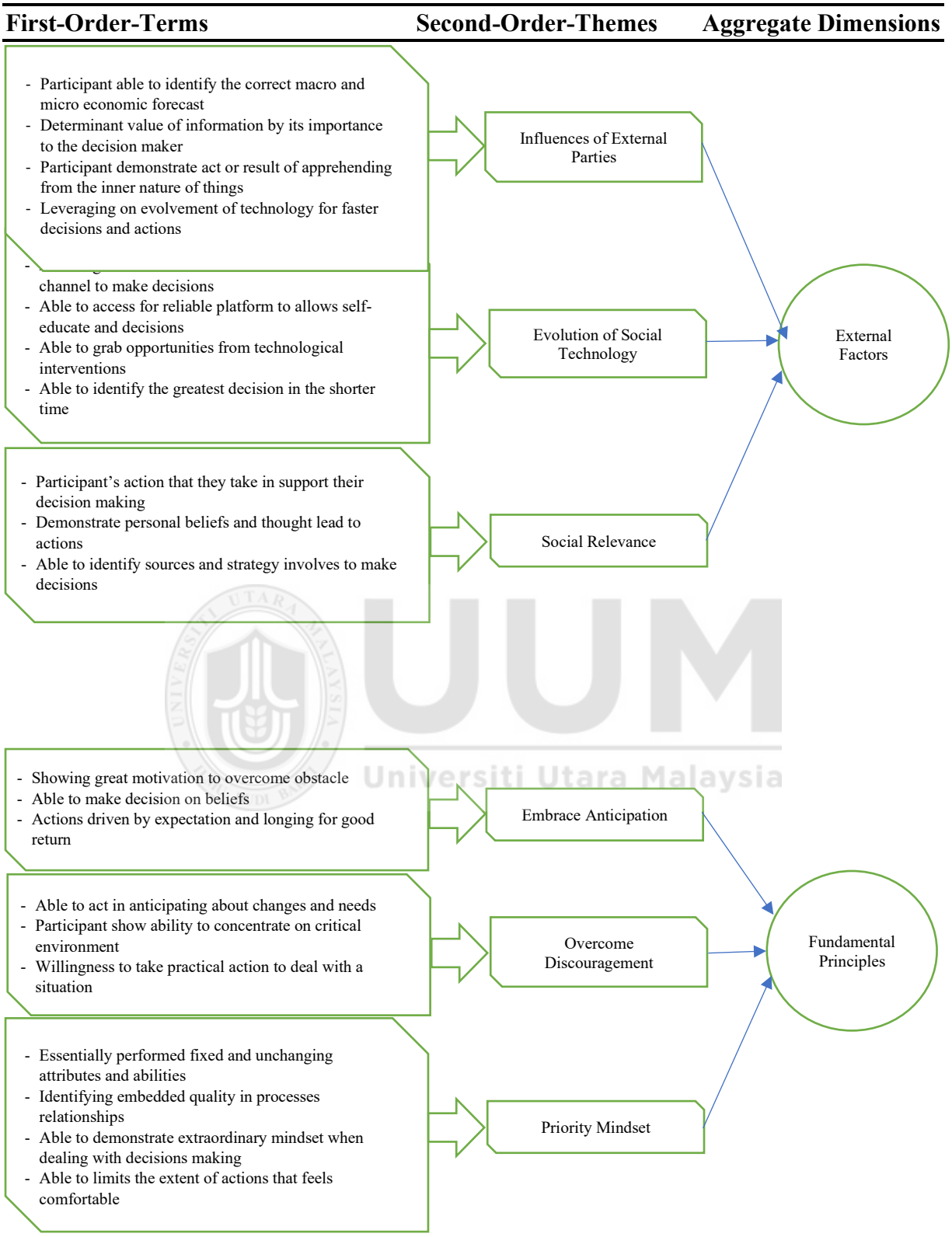
Data Structure



Adapted from Gioia, Corley & Hamilton, (2012).

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Appendix 6

Example Interview Questions on Investment Decision Making

No	Category	Question
1.	Investment Decision Making	"I am interested to know how do you make your investment decision?"
		"Do you mind to share what are your investment techniques?"
		"I wonder do you have your own investment philosophy?"
		"What is your investment strategy? How you do your "investment analysis?
		"Do you think you rational enough in investment?"
		"What is your based line in investment decision making?"

Example Probing Questions on Investment Decision Making

No	Category	Question
2.	Investment Decision Making	"This is sound very interesting, what is your next action?"
		"Where you learn it from? Can you elaborate more?"
		"From who you gain the knowledge? Why you learn it from him?"
		"Can you explain further why you say so? You buy or you sell? What is your next action?"

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Example Interview Questions on Rumor and Financial Rumor

No	Category	Question
3.	Rumor and Financial Rumor	"Do you know what is rumor? What is rumor from you understanding?"
		"Do you know what is financial rumor? From where you hear this financial rumor?"
		"Do you ever hear any financial rumor before? Why rumor appear in financial market?"
		"Do you take any opportunity on financial rumor before? What makes you believe in that rumor?"

Example Probing Questions on Rumor and Financial Rumor

No	Category	Question
4.	Rumor and Financial Rumor	"Why you believe/not believe in rumor? What is you action? What do you do next?"
		"From where you get all this financial rumor? What is your next action? Can you share to me?"
		"Do you check on credibility of the rumor? Why you choose to believe/not believe?"

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Example Interview Question on Influencing Factor

No	Category	Question
5.	Influencing Factor	"How you do you trading? By your own or through Remisier/Dealer?"
		"Tell me you trading activities during Movement Control Order (MCO)?"
		"What is your expectation on current shares market situation?"
		"What is your area of consideration in investment?"

Example Probing Question on Influencing Factor

No	Category	Question
6.	Influencing Factor	"What is your action on their recommendations? Do you follow what they recommended?"
		"Let's say if the recommended shares are out of your radar, what is your action?"
		"Will you do double checking of your source? Why yes why not?"

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Example Interview Question on Personal Factor

No	Category	Question
7.	Personal Factor	"Do you think you rational enough in doing investment?"
		"How do you look at speculative shares?"
		"How do you determine yourself in shares investment?"
		"Do you use any social media? What is your view on financial news from social media?"
		"How you manage your investment portfolio? How often you refresh it?"
		"I am curios what kind of investor you consider you are?"
		"No offend, can I ask when usually you buy/sell shares? Why you buy/sell your shares?"

Example Probing Question on Personal Factor

No	Category	Question
8.	Personal Factor	"Can you share you experience?"
		"Why you never buy on speculative shares?"
		"From which channel usually, you get that financial news?"
		"Can you explain why you never sell your shares?"

Adapted from Creswell (2013)

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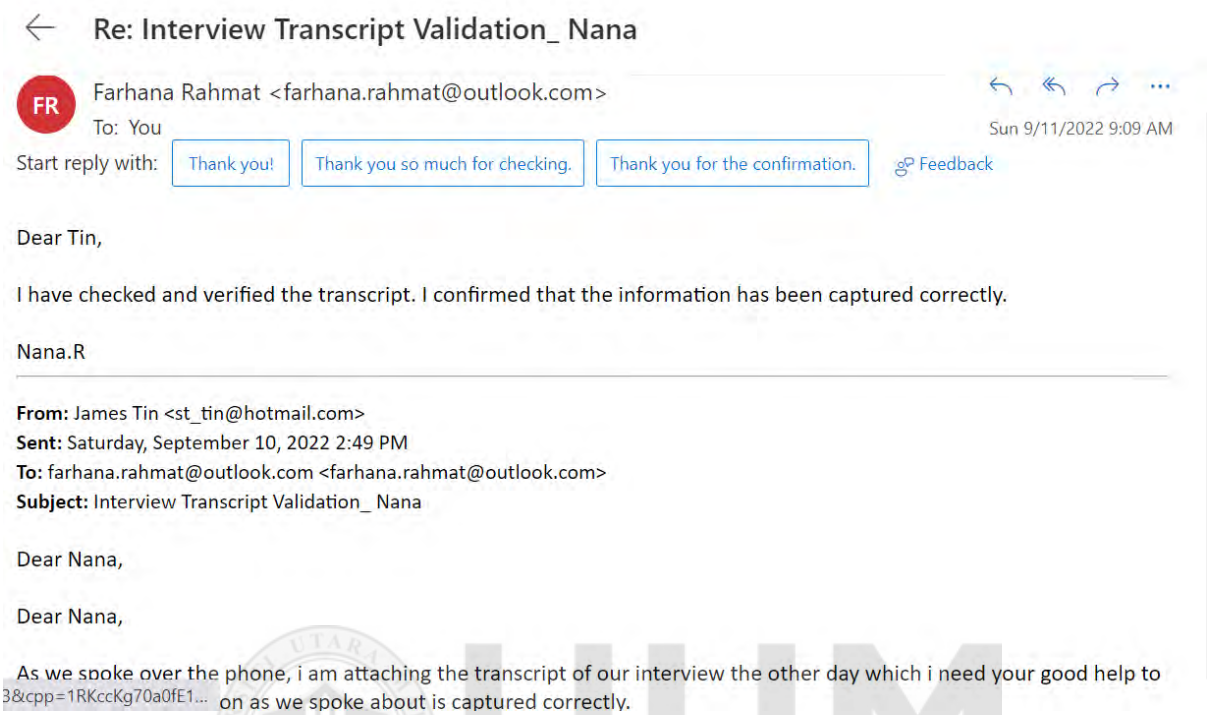
Appendix 7

Members Checking Response

1). Participant#14



Re: Interview Transcript Validation_ Nana

FR Farhana Rahmat <farhana.rahmat@outlook.com>

To: You

Sun 9/11/2022 9:09 AM

Start reply with: Thank you! | Thank you so much for checking. | Thank you for the confirmation. | Feedback

Dear Tin,

I have checked and verified the transcript. I confirmed that the information has been captured correctly.

Nana.R

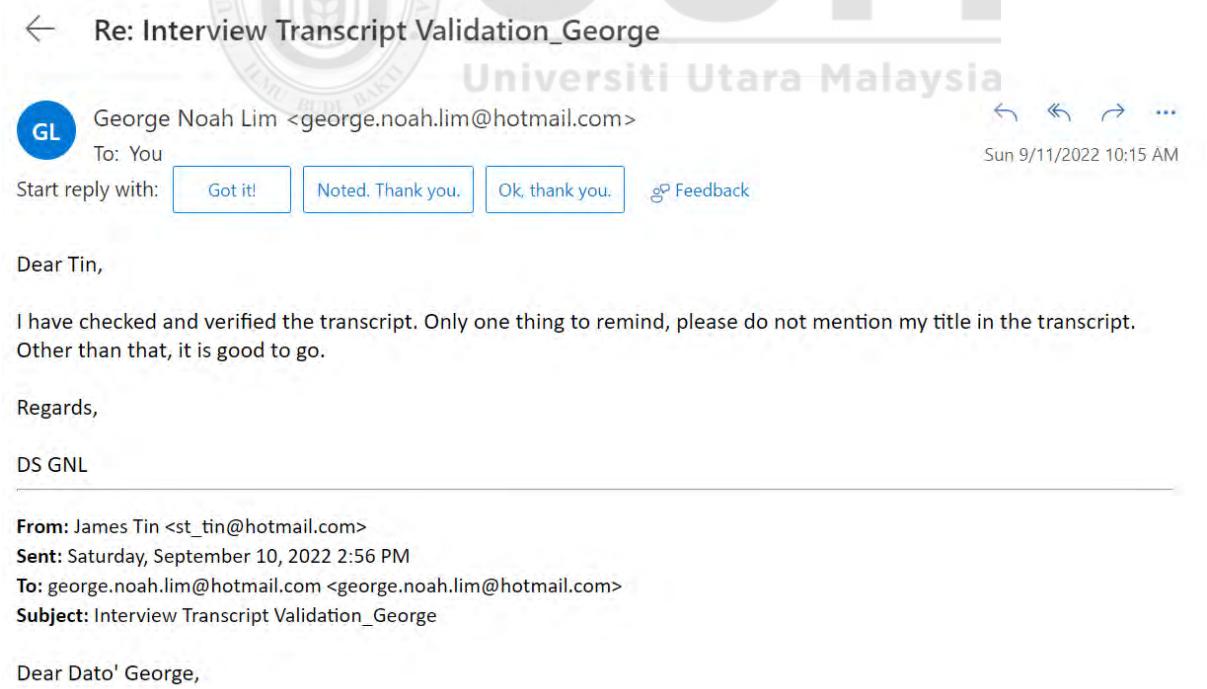
From: James Tin <st_tin@hotmail.com>
Sent: Saturday, September 10, 2022 2:49 PM
To: farhana.rahmat@outlook.com <farhana.rahmat@outlook.com>
Subject: Interview Transcript Validation_ Nana

Dear Nana,

Dear Nana,

As we spoke over the phone, i am attaching the transcript of our interview the other day which i need your good help to
3&cpp=1RKccKg70a0fE1... on as we spoke about is captured correctly.

2). Participant#29



Re: Interview Transcript Validation_George

GL George Noah Lim <george.noah.lim@hotmail.com>

To: You

Sun 9/11/2022 10:15 AM

Start reply with: Got it! | Noted. Thank you. | Ok, thank you. | Feedback

Dear Tin,

I have checked and verified the transcript. Only one thing to remind, please do not mention my title in the transcript. Other than that, it is good to go.

Regards,

DS GNL

From: James Tin <st_tin@hotmail.com>
Sent: Saturday, September 10, 2022 2:56 PM
To: george.noah.lim@hotmail.com <george.noah.lim@hotmail.com>
Subject: Interview Transcript Validation_George

Dear Dato' George,

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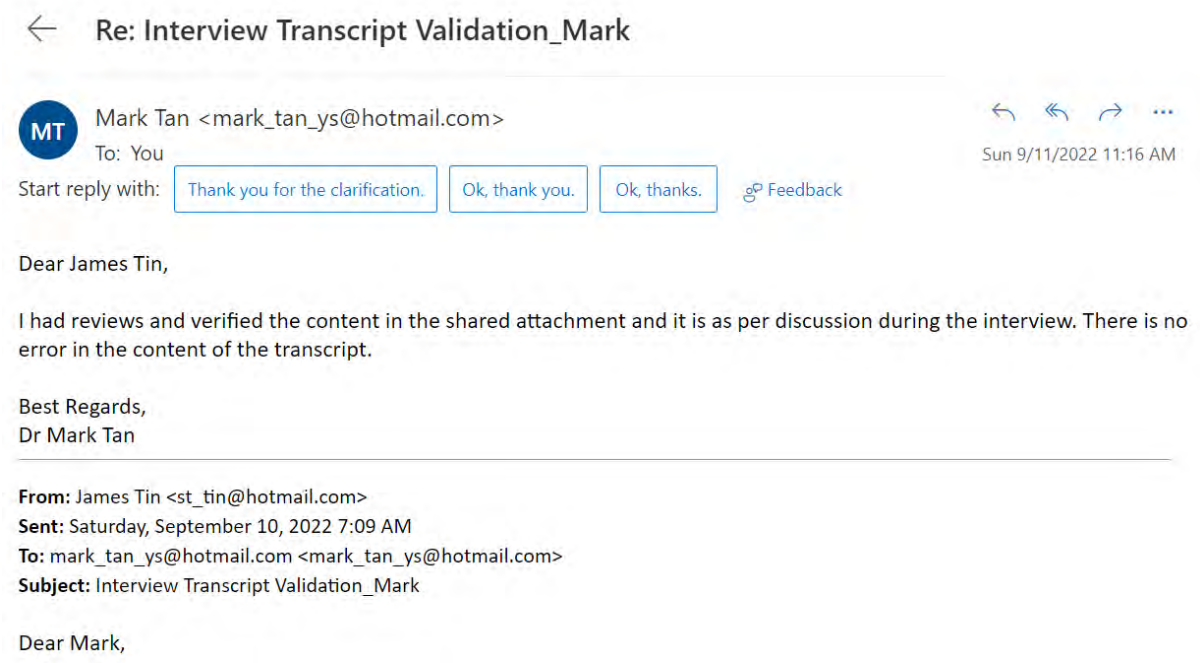
3). Participant#28



Re: Interview Transcript Validation_Mark

MT Mark Tan <mark_tan_ys@hotmail.com>
To: You
Sun 9/11/2022 11:16 AM

Start reply with: Thank you for the clarification. | Ok, thank you. | Ok, thanks. | Feedback

Dear James Tin,

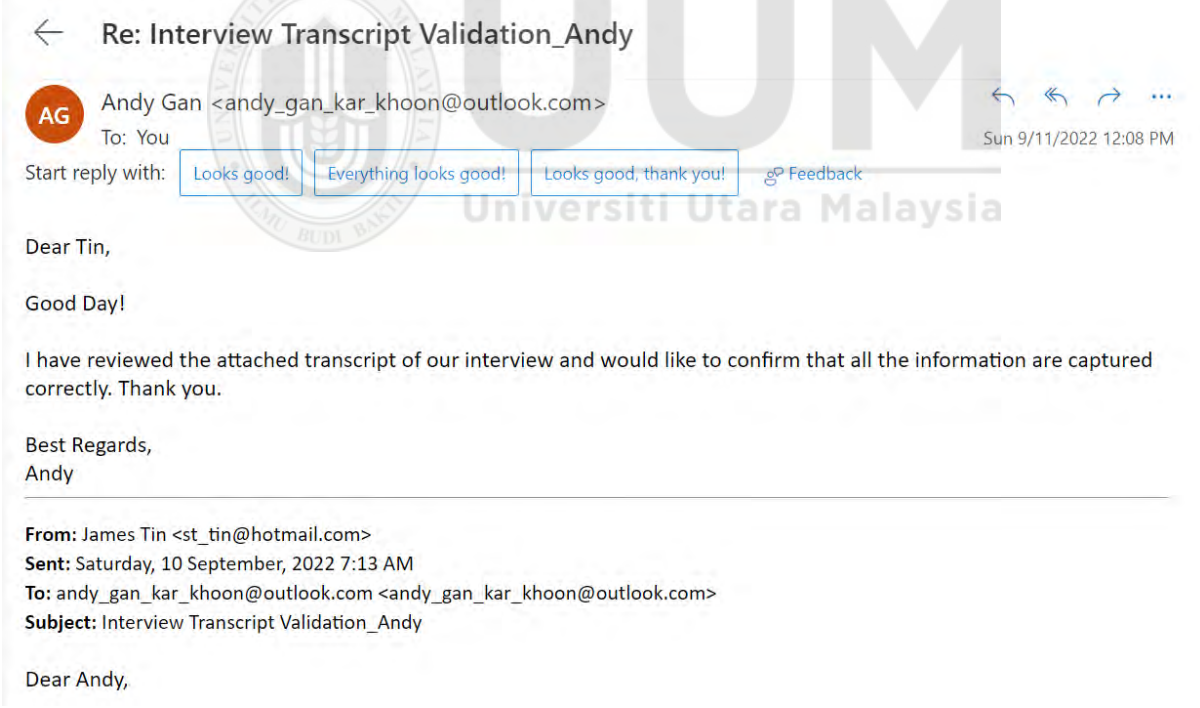
I had reviews and verified the content in the shared attachment and it is as per discussion during the interview. There is no error in the content of the transcript.

Best Regards,
Dr Mark Tan

From: James Tin <st_tin@hotmail.com>
Sent: Saturday, September 10, 2022 7:09 AM
To: mark_tan_ys@hotmail.com <mark_tan_ys@hotmail.com>
Subject: Interview Transcript Validation_Mark

Dear Mark,

4). Participant#20



Re: Interview Transcript Validation_Andy

AG Andy Gan <andy_gan_kar_khoon@outlook.com>
To: You
Sun 9/11/2022 12:08 PM

Start reply with: Looks good! | Everything looks good! | Looks good, thank you! | Feedback

Dear Tin,

Good Day!

I have reviewed the attached transcript of our interview and would like to confirm that all the information are captured correctly. Thank you.

Best Regards,
Andy

From: James Tin <st_tin@hotmail.com>
Sent: Saturday, 10 September, 2022 7:13 AM
To: andy_gan_kar_khoon@outlook.com <andy_gan_kar_khoon@outlook.com>
Subject: Interview Transcript Validation_Andy

Dear Andy,

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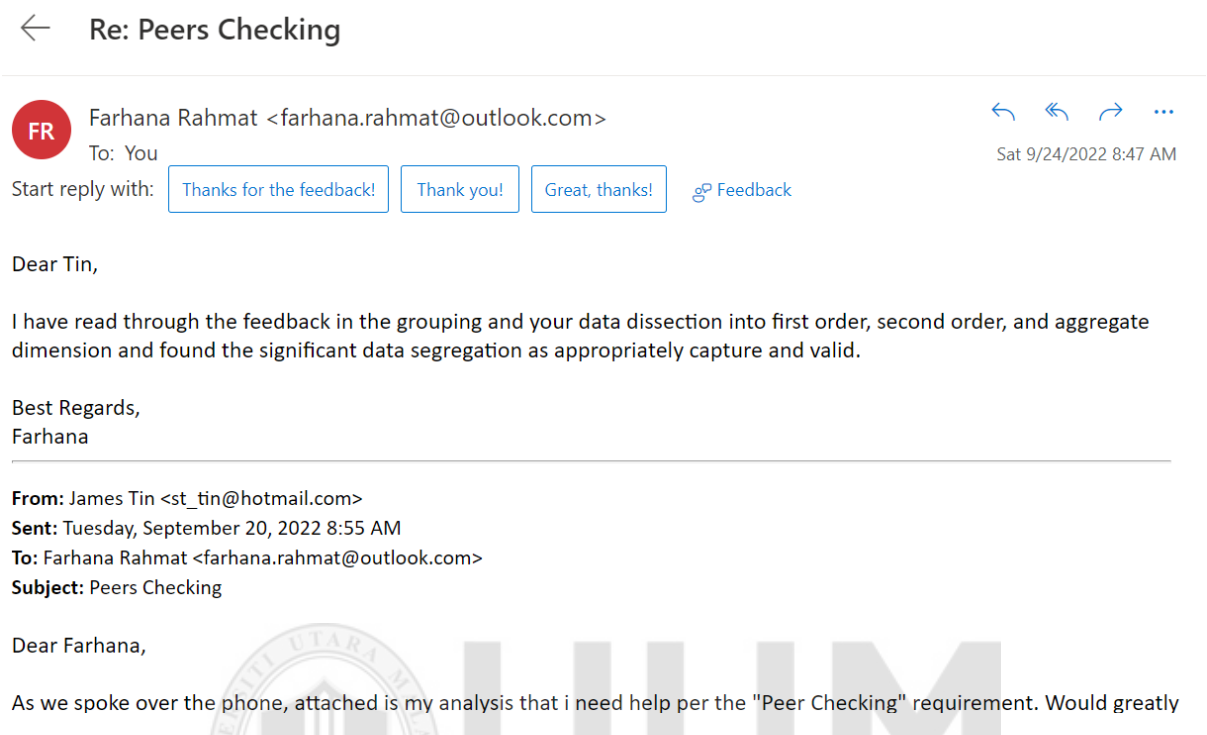
Appendix 8

Peers Review

1). Puan Farhana Atiqah Binti Rahmat (work colleague)



Re: Peers Checking

FR Farhana Rahmat <farhana.rahmat@outlook.com>
To: You
Sat 9/24/2022 8:47 AM

Start reply with: Thanks for the feedback! Thank you! Great, thanks! Feedback

Dear Tin,

I have read through the feedback in the grouping and your data dissection into first order, second order, and aggregate dimension and found the significant data segregation as appropriately capture and valid.

Best Regards,
Farhana

From: James Tin <st_tin@hotmail.com>
Sent: Tuesday, September 20, 2022 8:55 AM
To: Farhana Rahmat <farhana.rahmat@outlook.com>
Subject: Peers Checking

Dear Farhana,

As we spoke over the phone, attached is my analysis that i need help per the "Peer Checking" requirement. Would greatly

2). Mr Andy Gan Kar Khoon (work colleague)

Re: Peers Checking

AG Andy Gan <andy_gan_kar_khoon@outlook.com>
To: You
Sat 9/24/2022 9:00 AM

Dear James Tin,

After i reviewed the data, respondent and summary outcome, predictively and collectively the data conclude to the same outcome. As external reviewer, i believe this data elucidate overall perception on analysis even though different respondent answered differently however the outcome of analytical approach root the same answer on methodology used. Overall technique and regression used was good. Congrats.

Regards,
Andy

From: James Tin <st_tin@hotmail.com>
Sent: Tuesday, 20 September, 2022 12:56 AM
To: Andy Gan <andy_gan_kar_khoon@outlook.com>
Subject: Peers Checking

Dear Andy,

As we spoke over the phone, attached is my analysis that i need help per the "Peer Checking" requirement. Would greatly

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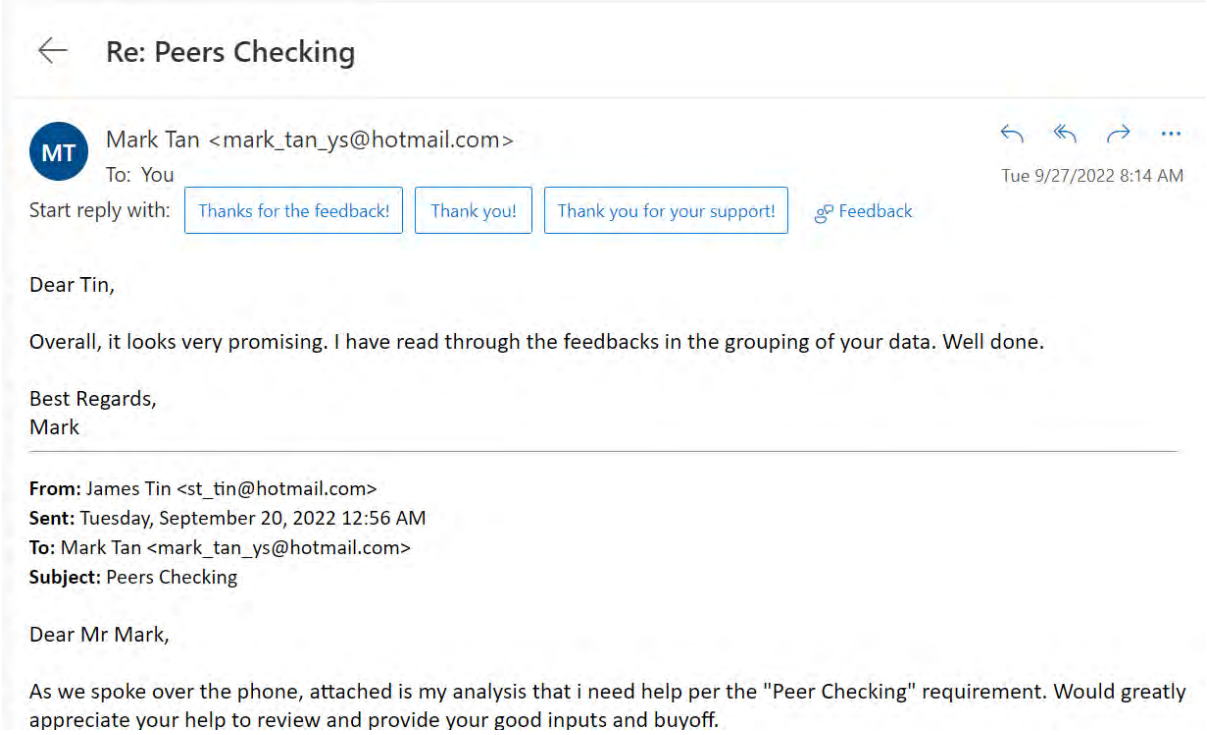
3). Mr Mark Tan (work colleague)



Re: Peers Checking

MT Mark Tan <mark_tan_ys@hotmail.com>
To: You
Tue 9/27/2022 8:14 AM

Start reply with: Thanks for the feedback! Thank you! Thank you for your support! Feedback

Dear Tin,

Overall, it looks very promising. I have read through the feedbacks in the grouping of your data. Well done.

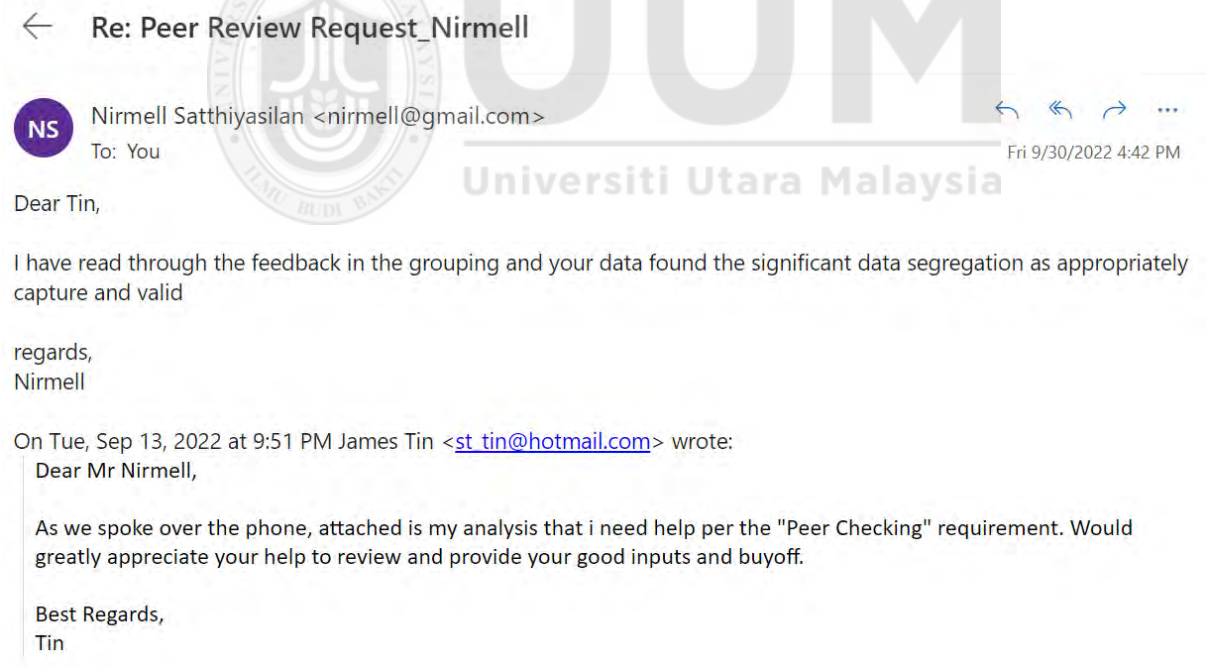
Best Regards,
Mark

From: James Tin <st_tin@hotmail.com>
Sent: Tuesday, September 20, 2022 12:56 AM
To: Mark Tan <mark_tan_ys@hotmail.com>
Subject: Peers Checking

Dear Mr Mark,

As we spoke over the phone, attached is my analysis that i need help per the "Peer Checking" requirement. Would greatly appreciate your help to review and provide your good inputs and buyoff.

4). Mr Nirmell (work colleague)



Re: Peer Review Request_Nirmell

NS Nirmell Satthiyasilan <nirmell@gmail.com>
To: You
Fri 9/30/2022 4:42 PM

Dear Tin,

I have read through the feedback in the grouping and your data found the significant data segregation as appropriately capture and valid

regards,
Nirmell

On Tue, Sep 13, 2022 at 9:51 PM James Tin <st_tin@hotmail.com> wrote:

> Dear Mr Nirmell,
>
> As we spoke over the phone, attached is my analysis that i need help per the "Peer Checking" requirement. Would greatly appreciate your help to review and provide your good inputs and buyoff.
>
> Best Regards,
> Tin

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Appendix 9

Personal Particular of Peers

Name	Topic of Study	Subject	University	Years of Experience in Qualitative Research
Puan Farhana Atiqah Binti Rahmat	Study of psychology and mental processes	Psychology	UKM	2
Mr Andy Gan Kar Khoon	Prescription drugs in society: concept and control	Behavioral Science	INTI	3
Mr Mark Tan	Cardiovascular disease and the circulatory system	Genomic Medicine	READING	1
Mr Nirmell A/L Satthiyasilan	Study of Origins of life on earth the universe	Astrobiology	UKM	2

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Appendix 10

Concept Forming Rumor

Category	**Interview Participant**
Individual Based	…apparently when my friend who work in QL say Dr Chia (Chairman of QL Resources) will step down as company's chairman, quickly I sell-off all QL's share. And you know what happened next? QL share price tumbled…(Participant#18)
	…you can see fluctuation in their company share price when they announced new CEO few days ago. (Particpant#19)
	…luckily, I did not hold any Sapura Energy's shares at that time. SC has fined 2 of the company directors and banned them from hold any directorship for 5 years. (Particpant#12)
	…you see, when there are changes in boardroom in any listed company, shares prices will react. Recently when Jade Marvel announced several boardroom members changes following the outcome from their previous AGM and EGM. (Participant#16)
	…the media must be responsible, which is to tell and report the truth of the misconduct of their boss. If the information is true, enforcement body should act on him. We as shareholder must be protected. (Participant#10)
	…even though the CEO Datuk Azhar set down, I do not think it would bring anything to the company. The whole structure of BOD majority is controlled by their family members. One sibling go, other siblings will replace it. (Participant#16)
	…the garden leaven project by Maju Perak is mutual understanding between their outgoing MD with their vendor, nothing in black-and-white. But end up it fired back to the company. (Participant#5)
Category	**Interview Participant**

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Company Based	…when news come out, market will react, people like us start to buy and price will go up. During any M&A activities like Digi and Axiata, people from corporate finance is the one who get involve. So, I can tell you they are most highly suspected party who bring out all these rumors to the public. (Participant#9)
	…look at the indicator, it will help you a lot. Company needs to do their financial announcement every quarter, and when you hear anything negative about the company financial results, that is time for you to get off from the market. I take all these considerations before I sell off. (Participant#17)
	…if I missed out, I will look for other company in the same sector. Normally its movement of share price will influence other companies in the same sector. Still, I will buy, just wait for right timing. (Participant#11)
	…from where do you think all these company rumors comes? It must be from reliable source or person. It is not often we can hear news from these companies. So, buy their company's shares before others hear it. Of course, I do so. If it does not have any impact, you just sell it off. (Participant#29)
	…thanks to his "tips" (market rumor) ask me to buy companies that related to CPO (crude palm oil). Raises of CPO price helps me to make more than 20% profit gain on average, mainly from oil and gas companies. (Participant#6)
	…I think Yinson is a good company. You could expect a certain upfront from the client as part of the term. This will bring benefit to us as their shareholder. (Participant#29)
Category	**Interview Participant**

Country Based	…remember when PH win in PRU14? Market stays stagnant and it only move in very flat mode. Why this happened if we compare to previous GE results? This is because not many companies link to PH, if you compare to those companies link to previous BN government. (Participant#26)
	…I am more prefer to hear US market conditions because for me Asia market are highly influenced by US market. If US market goes down, normally I will sell off my shares when our market open. (Participant#27)
	…It takes short time for foreign market to rebound and it happen same way to our share market. US market rebound not even in one week after sharp fall in March 2021. This has given huge impact to our share market. They even say in TV market is going to be better this year. This has given me huge confidence in our market. For sure I will wait for that to sell my shares. (Participant#5)
	…although it might vary from what we see in real, but I believe our country conditions will become better with more and more business activities after pandemic. (Participant#28)
	…currently US stakeholders need to be fully engaged in international standards organizations, where the critical but sometimes invincible standards that they have set. Higher OPR will affect our domestic OPR as well. (Participant#27)
	…travel restrictions enacted in 2020 to fight Covid-19pandemic left our country palm oil industry short of hundreds of thousand foreign workers needed to maintain and harvest fruit bunches. (Particpant#29)

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Appendix 11

Concept of Forces Spreading Rumor

Category	Interview Participant
Direct Mechanism	…my remisier ask me to buy company "A", but before I decide to buy, I will ask my ex-boss who is a good friend to company "A" top management. This is my common practice before I make up my mind. (Participant#13)
	… In my experience, perception is everything, and how a person receives a rumor could greatly vary based on their own personal life experiences. He will straight away share with you if he thinks it is relevant. (Participant#13)
	… we are much more social, so it can be very helpful to get information from people close to you. I really enjoy he share any market news in the morning to me. It makes me easier in my investment decision because he has cut down a lot of time for me to search around and check the validity. (Participant#24)
	… I have experimented with people who spread market rumors. He is a good friend of mine, and he is staying nearby me too. I think part of the reason is because of his job as a remisier. So, maybe he should do at least one round filtering rather than just sharing everything out to his customer. (Participant#23)
	…he is good in this. People are willing to immediately assume that a rumor is true is because it makes 'things' more exciting for them, regardless of the effect the rumor has it impact to the market or not. (Participant#8)
	… I will say that people seem to naturally think in terms of narrative. Most rumor shapes events into stories. For me I choose to believe it. (Participant#14)

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Category	Sub-Category	Interview Participant
Indirect Mechanism	**Technology**	…we have our own private Whatsapp group, and I will share latest news I heard with them. Of course, I will filter before I share it out. I will be happy if they make money, but if they lose money because of the news i shared not accurate, then I feel sorry. (Participant#2)
		…do not believe those rumor in blogs, they talk nonsense. It depends on how you look at it. For me blogs are the place for entertain, if you serious you will get burned. I get burned few times because of blogs. There are numbers of trading classes in town recently, especially during MCO when everybody cannot go out. Believe me, it going to be more people get burn. (Participant#24)
		…If you talking about 10 years back yes, it is true people gossip and spread rumors in coffee shop. Although the power of spreading rumor is limited but they still can actively trade. Now everything has changed, everyone using smart phone, even old uncle aunty also knows how to use smartphone to trade. Same to me, I buy shares using smartphone now a days. (Participant#8)
		…now you have webinar, online classes to teach you on shares trading, also classes for technical charting. Although is not cheap, but there is a lot of people go to join these classes. But for me this is the platform they try to lobby on certain companies. Normally I would not buy on their recommendations. (Participant#23)

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		… social media is truly an ideal model change or change in world view as opposed to just another arrangement of strategies. I think for new generation, most of them are using social media to gain market information. Even older generation I can see they are also catchup fast. (Particpant#1)
		… social media has changed the lives of many people, as it provides a better social life where you are in contact with all your near and dear ones through a matter of a click. Beside calling through phone, people using social apps changing information and news. (Participant#8)
Indirect Mechanism	**Conventional Media**	…I have smartphone but I seldom use it, newspaper is still my daily routine to get info. For me newspaper is more reliable. (Participant#10)
		…you must look for high credibility source. Listen to Bloomberg, CNBC, or refer to The Edge for local and Singapore market news. Do not refer to blogs and news posted in social media. That is the must for me before I buy. I have been fooled by their recommendations before, enough for me. (Participant#29)
		…in the 80s and 90s, you get news from your friends, newspaper, or business magazine. By the time you noticed, shares price already moved. Now is different, I can get all these news from my smart phone. I even can sell my shares on the spot. (Participant#20)
		…this becomes my routine for the past 50 years. Reading newspaper is part of my life. This good habit can provide a great sense of educational value. It carries information about politics, economy, business, industry, trade, and commerce. With this habit, it will not

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		only enhance my knowledge about general information. (Participant#4)
		…the right medium does matter when it comes to reaching the right demographic. For me, when you used to it, it can immediate delivery of message. (Participant#10)
		…traditional television and radio media channels still dominate when it comes to discovering, and with its massive reach, tends to deliver bigger results. (Particpant#11)
Indirect Mechanism	**Third Person**	…I am heavily relying on my remisier. Almost every day i get 'tips' from him. He will share 'tips' (market rumor) to all his client, including me to buy on certain share with target selling price. Well, sometimes I do lose money because of tips. (Participant#29)
		…when expert say he get the news from his associates that company "A" is good and shares price will go up, then I will choose to believe and buy. The longer time I think, the longer I suffer the dilemma. But believe me, not all expert is true hearted in share market. (Participant#28) …she says the longer time to turn rumor into news, the lower desire she wants to invest. I will not act so fast after like what she does, I need to check it properly. Sometimes I buy, but sometimes it end-up I did not buy anything. (Participant#12)
		…why so headache? I can just follow his recommendations. You are not expert, but they are. So, just listen to expert. My trading account is under him for years, I trusted him. When he says buy, I will buy. (Participant#12)

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		…that is the darkest moment in my life. I sold all my properties to cover losses. It took years for me to recover. When I look back, I can see how stupid am I trade share based on remisier's recommendations. I will not trust him anymore. (Participant#19)
		…I think when these "gurus" recommend shares to invest, they must be having some interest. This also can be one of the channels he can spread rumors. Be smart, you cannot follow exactly what they say. I will filter before I buy. If it is a good company, then I will buy some. (Participant#11)
		… of course, I get influenced from my ex-colleague who work as personal banker. Usually, I buy from her recommendations. (Participant#18)

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Appendix 12

Theming Process

First-Order-Terms	Second-Order-Themes
Measure of a financial value reaction to changes in underlying factors. This action helps participants isolating risk, hedging risk, and explaining profit & loss	Theme 1: Environment Sensitivity
Basis actions that participant seeks for some investment recommendations towards their investment	
The magnitude of participant's reaction to changes in underlying factors, most often in terms of response to the process of decision making	
Set of goals that determines participant's financial portfolio	Theme 2: Investment Strategy
Objective that is set by participant and typically is set to mature at a future time	
Participant have knowledge of, conscious of, or have a perception of an event and are very aware of circumstances	
Actions about possible investment risks that is not justified by the facts at hand	
Degree of participant's willingness to endure within their portfolio	

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First-Order-Terms	Second-Order-Themes
Participant use this as guidelines to govern their behavior in a way which allows them to remain faithful to the tenets of their investment philosophy Decided to do accumulation process by averaging up prices of all the shares purchases	Theme 3: Investment Knowledge
Process of determining the most efficient investment strategy for participant, with the goal of maximizing their investment profit	
Urge of participant decision making process change as they progress through different stages and time	
Uncertain opinion or a lack of confidence that might lead to adverse outcome	Theme 4: Social Approach
Alternative values from expert to guide participants to make decisions	
Helps to ensure right criteria are identified and defined with all appropriate alternatives are considered	
Older investors make more conservative investment decisions and their decisions reflect greater knowledge about investing	
Asking for peers' opinion to share experiences that can build concreate decisions	Theme 5: Situation Attention
Leverage on events or situations that unusual or may have had an impact on shares market	
Style of trading that attempts to capture short-to medium-term gains in shares market	
Grab any possibilities that participant can take advantage of	

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First-Order-Terms	Second-Order-Themes
Bias occurs when participant in selection process	Theme 6: Investor Attributes
Stubbornly holding to one's own opinion	
Participant able to demonstrate strong self-discipline in action	
Ability to recognize what is the most comfortable position, and not react against or beyond boundaries	
Demonstrate passive and evidence-based investing, which seek on influencing factor to make decision	Theme 7: Investor Character
Setting the applicable framework as golden rules in investment	
Provide the opportunity to the participant to take control of his investment	
Patience and discipline are a virtue that will benefit participant	
Knowing how to prioritizes the preservation of capital over market returns	
Acting from participant that led them to make sub-optimal decisions and undermine their decision in the shares market	Theme 8: Investor Emotion
Participant demonstrate capacity to engage in interdependence with a sense of safety and wholeness that can be damaged	
One party in a set of process has a direct influence on another party	
Willingness from participant to respond fearlessly despite the anxiety	
Expressing very happy and proud because of such an achievement	

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First-Order-Terms	Second-Order-Themes
Able to show essential quality determining intrinsic nature behavior	Theme 9: Investor Behavior
Experiencing behavioral response that is greater than normal	
Participant demonstrate self-control to restrain their desires and impulses	
Ability to tune in to participant's feelings, thoughts, and actions	
Participant able to identify the correct macro and micro economic forecast	Theme 10: Influences from External Parties
Determinant value of information by its importance to the decision maker	
Participant demonstrate act or result of apprehending from the inner nature of things	
Leveraging on evolution of technology for faster decisions and actions	
Able to gather useful information from reliable channel to make decisions	Theme 11: Evolution of Social Technology
Able to access for reliable platform to allows self-educate and decisions	
Able to grab opportunities from technological interventions	
Able to identify the greatest decision in the shorter time	
Participant's action that they take in support their decision making	Theme 12: Social Relevance
Demonstrate personal beliefs and thought lead to actions	
Able to identify sources and strategy involves to make decisions	

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First-Order-Terms	Second-Order-Themes
Showing great motivation to overcome obstacle	Theme 13: Embrace Anticipation
Able to make decision on beliefs	
Actions driven by expectation and longing for good return	
Able to act in anticipating about changes and needs	Theme 14: Overcome Discouragement
Participant show ability to concentrate on critical environment	
Willingness to take practical action to deal with a situation	
Essentially performed fixed and unchanging attributes and abilities	Theme 15: Priority Mindset
Identifying embedded quality in processes relationships	
Able to demonstrate extraordinary mindset when dealing with decisions making	
Able to limits the extent of actions that feels comfortable	

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Appendix 13

Aggregate Dimension Forming Process

Second-Order-Themes	**Aggregate Dimension**
Environmental Sensitivity	Aggregate Dimension 1: Anticipated Outcome
Investment Strategy	
Investment Knowledge	
Social Approach	
Situation Attentive	
Second-Order-Themes	**Aggregate Dimension**
Investor Attributes	Aggregate Dimension 2: Subjective Probability
Investor Character	
Investor Emotion	
Investor Behavior	
Second-Order-Themes	**Aggregate Dimension**
Influences of External Parties	Aggregate Dimension 3: External Factors
Evolution of Social Technology	
Social Relevance	
Second-Order-Themes	**Aggregate Dimension**
Embrace Anticipation	Aggregate Dimension 4: Fundamental Principles
Overcome Discouragement	
Priority Mindset	

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