

The Role of Personality and Social Networks on Ponzi Investment Decision: A Review

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ABSTRACT

Introduction: Ponzi schemes are popular and increasingly sophisticated schemes to defraud people by promoting get-rich-quick fantasies. Many people take advantage of this kind of investment opportunity because of the promise of very high returns even without risk. Social media exposure, increasing lifestyle and the phenomenon of fear of missing out also encourage individuals to fulfill their needs and the opportunities to get rich in quick.

Objectives: The paper attempts to provide review of the role of an individual's personality and social networks in shaping their willingness to join Ponzi scheme by linking the gullibility theory and theory of planned behavior. The paper is expected to provide ideas for further research on the role of personality and social networks in Ponzi scheme investment decisions.

Methods: To structure the discussion, a conceptual review of Ponzi and the related theory is made to enhance the understanding of supporting explanation of why people trapped on Ponzi. In addition, the paper provides the role of internet and social media as promotion media nowadays. The last section refers to generation's problem as one of the possible reasons why people fall prey in Ponzi.

Results: Personality traits as one factors in gullibility theory which can explain willingness to invest in Ponzi scheme. The motivation to join a risky investment are either internal or external pressure. Social networks may influence the decisions, particularly in today's internet and social media environment. Generational differences mean different character, traits, motives and preferences. It also relates to the way they view money, needs and wants.

Conclusions: Personality traits and social networks play a role in encouraging individuals to join risky investment such as Ponzi scheme. Personality traits are also related to one's and may depend on how their social networks encourage behavioral tendencies. Generation's problem is another factor to what extent people willing to join Ponzi scheme. Empirical study on the role of personality traits across generations and social networks on Ponzi investment decisions should be considered as future research agenda.

Keywords: Ponzi scheme, social networks, personality traits, TPB, money game

INTRODUCTION

The issue of financial well-being has become increasingly popular in the midst of massive social media that encourages many people to compete for recognition in society. The flexing phenomenon on social media also reinforces the desire of individuals to have a lot of money (rich) so that they can "flex" their lifestyle or financial achievements to others through social media. The internet and social media are not only used to find and exchange information, but have led to how something shared by others can change or shape a person's behavior, including consumption behavior, investment and risky decision making.

Investment has become one of the alternatives to make money that is expected to improve people's financial well-being. In the midst of increasingly complex financial markets, people are faced with various investment offers that all emphasize the promise of high returns, although often do not provide information about the risks. Many people

make investment decisions independently, but investors do not always make the right investment decisions and make money. The numerous investments offer makes people must be able to identify the legal and save investment to avoid fraud.

The gullibility theory emphasizes that personality as one of factors behind the reason to engage in Ponzi scheme. Personality traits either supports or prevent people to consider the risky investment choices. In the concept of Theory of Planned Behavior (TPB), the tendency of individual behavior is influenced by external factors called subjective norms, which relate to the role of an individual's social environment in shaping their beliefs to behave. One of the characteristics of a Ponzi scheme is that it relies heavily on the continuity of members, when no more people joining then the scheme will collapse. For this reason, some investors who have invested in the scheme will try to prolong the scheme by encouraging others to join. It is therefore possible for them to intentionally (or not) inform, persuade and urge others to join the scheme.

The social aspect of the decision-making process is largely ignored in the finance literature or reduced to an imitative process and there is little evidence on the role of social interactions in individual financial decision-making (Preda & Muradoglu, 2019) especially on individual investment decisions in risky schemes such as Ponzi. Therefore, this paper attempts to review the role of an individual's personality and social networks in shaping their willingness to join Ponzi scheme investments. This paper is expected to provide ideas for further research on the role of personality and social networks in Ponzi scheme investment decisions.

What is Ponzi?

Ponzi comes from Charles Ponzi, who defrauded more than 40,000 Bostonians in the early 1900s by promising 50% returns in 45 days. Ponzi pretended to buy and sell international postal reply coupons on different markets, but in reality he used money from new investors to pay returns to previous investors. Thus, the label "Ponzi" is applied to schemes that involve fraudulently obtaining money from investors to pay returns to previous investors (Zhu et al., 2019). Ponzi schemes generally promise high returns with little or no risk (Baker & Puttonen, 2019; Bartoletti et al., 2020). The scheme requires a constant flow of funds from new investors to remain viable, if there are no more new investors or most investors exit the scheme then the scheme could potentially collapse or end (Frankel, 2009).

There is no exact definition of a Ponzi scheme, as these schemes manifest a kaleidoscopic variety of configurations. Thus, courts often look for general patterns rather than specific requirements (Eisenberg & Quesenberry, 2014). To identify whether a scheme is a Ponzi, it is common to use only red flags as described by Baker and Puttonen (2019):

1. It guaranteed high returns with little or no risk. This nature seems like "too good to be true"
2. Once-in-a-lifetime or exclusive offers. Fraudsters often persuade potential victims with the lure that investment is a limited-time opportunity
3. Fraudsters often emphasize how other savvy investors have invested so potential victims should too.
4. Pressure to buy quickly and tend to be "pushy". Fraudsters usually create a false urgency by claiming limited supply because they do not have enough time for their game
5. Overly consistent returns
6. Free seminar and lunches to attract and educating potential investors about the investment strategies
7. Unregistered products and salespeople
8. Fraudsters often avoid questions from potential investors
9. Complicated investment and strategies
2. Investments offered usually have mechanism that are difficult to understand, or even too simple then the investors just sit back and enjoy the returns

The Fourth Circuit referred to certain Ponzi scheme victims as "dumb victims of transparent fraud" (Eisenberg & Quesenberry, 2014). However, investors in Ponzi-like money game schemes cannot always be called victims of fraud for several reasons. First, it is likely that they decided to invest voluntarily because they wanted to take advantage of the opportunity to earn the promised profits. Secondly, when individuals earn huge money that make them happy, they are reluctant to be called victims and may prefer to call themselves investors. Conversely, when they experience losses or even lose money from the investment, they call themselves victims and claim the scheme as a fraud. The

perpetrators or Ponzi scheme investors often compare the benefits of placing funds with entities to banking institutions and emphasize that the returns from investing in these entities are much more favorable than in banking institutions. Things like this can obscure the risks of illegal Ponzi-like investments as they are masked with high returns and facts presented as weaknesses by the managers.

On the other hand, Reurink (2016) mentions that Ponzi schemes often increase their popularity by spreading false messages about the government and often reveal the weaknesses of a country's financial institutions such as the banking sector. Even from the investors' perspective, they believe that providing information to the authorities may prevent the investment manager from returning their money (Fairfax, 2002). Some cases in Indonesia itself prove that some Ponzi entities that were declared closed by the government and had an obligation to return investor funds tried to convince their investors by mentioning that the entity was closed because it did not give money to state authorities, and this is certainly a trick of the managers to reduce investor anxiety.

Gullibility and Personality Traits

Victims of financial fraud can be described as gullibility because they put their trust in a person, or scheme that should not be trusted. In the gullibility theory, Greenspan (2008) posits that there are four factors that contribute to the success of ponzi schemes: situation, cognition, personality and emotion. First, situational factors focus on the pressures faced by individuals when they decide to participate in ponzi schemes due to various pressures such as solicitation or persuasion from friends, family, coworkers and financial pressures. These situational factors can be linked to two personality types in the Big Five Personality Traits theory, namely extraversion and agreeableness.

Extraversion is reflected in the ability to socialize. Extraverts are energetic, sociable and adventurous individuals. They are talkative and often interact with friends, family, superiors for help in the decision-making process. These individuals tend to acquire information through increasing their social networks and are very confident in their decisions. Extraverted people like the consideration of others as a source of information. Individuals with this type are easily influenced by external elements and lack self-control. They are characterized by low intellect, lack of principle, low resistance, carelessness, good flexibility, vulnerability and a good sense of humor (Sadi et al., 2011).

Situation also linked to Agreeableness. People with this personality tend to be friendly, polite and avoid conflict to establish harmony. They also tend to trust others without any informed judgment and are ready to accept any kind of misinformation. In the case of ponzi schemes, agreeableness is positively correlated with a person's willingness to make risky investments because highly agreeableness people tend to trust others and follow the recommendations of friends or others or tend to show herd behavior (Jamshidinavid et al., 2012). Greenspan & Woods (2016) also mentioned that individuals who follow potentially fraudulent investment schemes tend to follow the advice of their social environment because they do not want to break social relationships with others, tend to want to maintain good relationships and avoid rejection to maintain the feelings of others.

The second factor that contributes to the success of ponzi schemes is cognition. Cognition is an element of gullibility, which is defined as people failing to use their intelligence when making decisions (Jacobs & Schain, 2011). Fraudsters will approach someone who does not have full knowledge of investments so that they can easily deceive investors. People who have limited knowledge and no experience in investment cause a person to potentially become a victim of fraud. The third factor is personality. Gullibility is sometimes compared to trustworthiness. People who are impulsive, tend to act quickly in decision-making especially when they are overconfident and/overtrusting can cause them to be gullible (Greenspan & Woods, 2016). People who are unwilling to say "no" to something because they are overconfident and willing to take risks have the potential to be deceived. Afiqah et al., (2021) state that trust and risk attitudes are indicators of investor personality that encourage them to be gullible.

Personality can be measured by the situation of trusting traits, risk takers and self-confidence. The nature of confidence describes how a person trusts other people so that they decide to join illegal investments. This trustworthiness can be driven by personal experiences and assessments of a person throughout their life, for example, their friend is a trustworthy person because they have been good friends and he has never deceived him. Trustworthiness can also arise because a person is attracted to and believes in the promise of ponzi investments such as the promise of getting a certain return every month.

Sometimes a ponzi scheme scam conveys potential risks to their potential investors, but the potential investors are nevertheless willing to invest and take the risk because they are focused on the returns offered. Meanwhile, self-confident refers to how confident a person is in deciding to invest in a ponzi scheme. This attitude can be influenced by other's experiences of success in such investments that encourage confidence in the offers. Perpetrators sometimes convince potential investors by providing evidence such as luxurious lifestyles, luxury cars, mansions and so on resulting from the investment. In addition, self-confidence can also grow due to positive experiences from similar investments that have been followed before. Ponzi scheme investment opportunities tend to be utilized by those who have previous money-making experience and are reinforced by the experiences shared by others. This tendency can lead to representativeness bias due to the belief that past experiences can be repeated.

When it comes to risk, people who are not easily fooled by ponzi schemes can relate to conscientiousness. Conscientiousness reflects a person's tendency to be cautious in performing an action or considerate in making a decision. This individual has a strong desire to succeed and constantly tries to find high-quality information that can meet their needs. Conscientious person tend to use a structured approach, analyzing in detail before making decisions. Whereas people who are victims of fraud are associated with less conscientious. Meanwhile, people with openness are curious, have an interest in something new and have a great desire to try something new. People with high openness tend to have high curiosity, be more creative, and imaginative (Nicholson et al., 2005). Kowert and Hermann (1997) also mentioned that openness has a strong relationship with risk taking.

The fourth factor that contributes to the success of ponzi schemes is state. Amoah (2018) states that state is people's motivation to make money and wealth once they join a ponzi scheme. State can motivate a person to behave foolishly or it can reduce a person's ability to make good judgment or to reflect on one's own actions. Greenspan and Woods (2016) mention that one can act foolishly when afraid of losing what they have. Meanwhile, people who are greedy and very eager want to get money quickly. In gullibility theory, a person's emotions aim to protect their wealth and fear of losing it. This means that a person has a strong desire to gain wealth in the future which is the main goal of the investment they are participating in. Perkins (2002 in Greenspan & Woods, 2016) makes a distinction between what he calls "true folly", "blind folly" and "plain folly". True folly occurs when one has no awareness of the risks in a situation. Blind folly is able to recognize risk but delude oneself into applying it to a particular situation, and plain folly involves recognizing risk but ignoring it thoughtlessly and being impulsive.

Social Networks

Social influence theory offers a framework for understanding the impact of social networks on financial decisions. This theory states that social networks are influential in changing individual attitudes, beliefs and behaviors (Kelman, 1958). Meanwhile, in the TPB framework, the factor that drives a person's interest and behavior is subjective norms, which relates to how individuals can be influenced by others they consider important. In terms of financial decisions, these theories view that people tend to be influenced by the financial recommendations and decisions of others. This influence can be in the form of direct sharing and advice or indirect influence (through observation and then imitation of others).

Social networks involve interaction and communication that can fulfill the need to be part of a group through opportunities to participate in conversations, express opinions and gain social acceptance (Gangadharbatla, 2010). Meanwhile, Laily (2020) states that a social networks is a pattern of connections in the social relationships of individuals, groups and various other collective forms, which can be interpersonal relationships as well as economic, political or other social relationships and can occur in formal or informal forms. Meanwhile, Potts et al (2008) define social networks as a group of interconnected individual agents who make decisions based on the actions (or signals) of other agents. These definitions emphasize communicative action over mere connectivity. Social here means the ability of one agent to connect to and interpret information generated by another agent and to communicate in turn, while network means specific connections (often enhanced by technology). Information and communication are important parts of social networks that drive individual behavior, including investment decisions.

Information plays an important role in purchasing decisions, especially investment products (Lin & Lee, 2002) in order to obtain optimal decisions. Information seeking is defined as the need to consult multiple sources before

making a purchase decision (Fodenss & Murray, 1997). Social interactions often create an exchange of information and knowledge in society. Individuals will seek more information before making an investment decision than before buying other goods because investments involve more risk and tend to be based on trust or experience. Taylor's (1974) risk-taking theory of consumer behavior, information seeking is a risk reduction strategy before individuals make a purchase decision. Although Tetlock (2015) mentions that even those who have a lot of information can still make wrong decisions. Moreover, in the current internet era, the problem faced by individuals is not lack of information but information overload, so they must be wise and selective in choosing credible information to support their financial decisions. Kotler said that a person can obtain information from various sources (Qazzafi, 2019), namely personal sources (family, friends, neighbors and acquaintances), commercial sources (advertisements, salespeople, web and company sites, packaging, displays), public sources (mass media, consumer rating organizations, social media, online searches and reviews) and experimental sources (trial and use of products).

Social influence refers to how one person can change the thoughts, feelings and behavior of another (Pratkanis, 2007). Social influence is triggered by "word-of-mouth" interactions in social networks about products, services and decisions (Kelman, 1958). Social influence on purchases can occur through observation, the process of recognizing, imitation, and when receiving advice. When individuals do not have much knowledge and information, they may believe and comply with the recommendations of these references (East et al., 2014). Social influence can be divided into two, namely informational influence and normative influence (Erb & Bohner, 2011). In informational influence, individuals use information provided by others as a source of the true value of the object under consideration. Whereas normative influence refers to the assumed need of individuals to align their attitudes with those of some others they value or respect such as spouses and reference groups. A person's opinion may not only reflect knowledge of a particular issue, but also reflect conformity with group opinion which means adopting a group identity.

Individuals may ignore the information they have and tend to imitate the actions of others because of the motivation to achieve informational goals or normative goals (Chan, 2010). Informational goals reflect the desire to make accurate decisions when a choice is ambiguous. While normative goals reflect the desire to affiliate with others and gain approval from their social environment. Individual investors often discuss and share experiences but can also often be influenced by their friends and family when making financial or investment decisions.

Greenspan (2009b) explains that it is easy for investors to fall for Ponzi scams because investors see the fact that other people have made a lot of money and become stories that can be persuasive evidence. This tendency is called irrational exuberance. The irrational exuberance theory posits that when people earn high returns on investments, they tend to tell others about their good fortune, making the investment seem safe and too good to pass up. This pressure of irrational exuberance will become greater especially when friends or relatives become rich after investing. Social networks such as the presence of family, colleagues or friends who have successfully invested and successfully purchased their needs and wants encourage individuals to be greedy in order to appear financially capable and accepted in their environment. Individuals who are highly motivated to earn high returns are less likely to process information or ignore investment-specific information and invest anyway (Lacey et al., 2020). Ponzi schemes can also be propagated and promoted by leaders in certain groups, such as religious, racial or ethnic groups, groups that share a particular hobby and others. Religious leaders may also influence individual decisions, even with little or no complete information provided. In general, group members will adjust their preferences to the group's preferences or tend to comply with the group leader. Social networks are essential to facilitate fraud because they create proximity, where fraudsters can identify their potential investors well so that they will find it easier to map and strategize the fraud. Generally, perpetrators would exploit familial or friendship ties in their community or groups. For example, the Madoff case involved a retiree in a Jewish group and he was considered a respected prominent Jewish philanthropist. Madoff used this recognition to deceive the other philanthropist members and obfuscate the scheme by promising small but steady profits so as not to arouse suspicion. The promise of such returns was successful in attracting members of the group who were retirees who generally expected stability or were perhaps more conservative.

Han et al., (2022) proposed a social interaction model that contains conversational bias, where individuals tend to boast about their investment successes rather than failures, which is called self-enhancing transmission bias.

Investors who are happy to get high returns tend to tell others about their investment success, and these successful investors often display a luxurious lifestyle that will attract more investors and make this investment more popular (Kramer & Buckhoff, 2012; Mohammed, 2021). This tendency may encourage other individuals who learn of their success to follow in their investment footsteps. Communication can provide new information to potential investors regardless of the credibility of the information.

Internet and Social Media

Nowadays, information can be obtained through various media, where the internet is the easiest and relatively cheap media that has become a popular medium for sharing information and knowledge with others. The internet is also a very important part of the development of the financial world, especially investment. Based on data from datareportal.com (2023), there were more than 212.9 million internet users in Indonesia at the beginning of 2023, which increased by more than 5.2% compared to the previous year and on average spent up to 7 hours 42 minutes per day accessing the internet. Meanwhile, the number of social media users in Indonesia reached 167 million and spent an average of 3 hours and 18 minutes accessing social media.

The Internet has to some extent changed the way people make choices and decisions as it provides information and access to increasingly complex financial products and services (Liu & Lu, 2023). The content available online provides information, influences or provides social support, although digital content can be easily copied, manipulated collected and searched (Kane et al., 2014). The amount of content or information obtained from the internet makes it possible for individuals to overload information so that it is difficult to distinguish which information is relevant and rational. A lot of people use the internet to find information about investment products as well as for analysis in order to choose suitable investment products or assets. Others use the internet to share their experiences and knowledge about various investment products. Experts may give advice to others with the aim (consciously or unconsciously) of influencing one's investment decisions. Others try to offer their investment products using the internet. Solanki, Wadhwa & Gupta (2020) mentions that individual Investors tend to be influenced by the information they obtain from various sources available online. Investors may search extensively and compare various information, views or advice from various parties available on online platforms.

Individual investors are often and easily influenced by relatives, friends and opinion leaders in online communities. Positive word of mouth by previous beneficiaries is more easily disseminated in online social communities (Zhu et al., 2019). Shanmugham & Ramya (2012) mentioned that media is a key factor influencing individual decisions. However, the media can sometimes exacerbate psychological biases, taking us away from formal investment analysis. Shiller (2000) also proved that the media has a tendency to hold information focused on a particular story over a long period of time, called 'attention flow'. Social media is a trending platform that influences the way people make investment choices (Solanki et al., 2019). Many new investors have even received much of their initial financial advice and financial education from social media platforms (Principato, 2021). Various forms of social media such as chat applications, Facebook, Instagram, Twitter and other internet-based media can be an intermediary between individuals to share opinions on certain interests. Usually, individuals are involved in certain social groups that have similar interests or views, including investment.

Nair (2011) describes social media as a shift where consumers and businesses engage in unstructured conversations, browsing, information sharing and purchase decision making. Social media is a complex combination of sociology and technology that offers unprecedented potential for communication and interaction (Miller et al., 2016). However, social media may also increase misinformation in social networks (Ma & McGroarty, 2017). Bollampelly (2016) points out that social media and websites work to deliver more timely financial news and information to investors, leading to a rationalization of their investment decision-making process. Kadous, Mercer & Zhou (2022) mention that individual investors often rely on investment advice from social media platforms even when such advice has little (if any) predictive value. However, social media is also referred to as a new forum that allows people to collaborate, exchange ideas and share information (Cao et al., 2020) and plays a role in increasing people's financial knowledge which can ultimately encourage users to buy financial instruments (Bartov et al., 2018; Eisenbeiss et al., 2023; Mäntymäki & Riemer, 2016) although some studies mention that interpersonal influences and social media do not

always support optimal investment decision making (Cao et al., 2020; Shanmugham & Ramya, 2012; Siikanen et al., 2018).

Abu-Taleb & Nilsson (2021) mentioned that research on the role of social media in understanding investor decision-making behavior is still limited and there are still research gaps that explain the impact of online social media on investment decisions (Ismail et al., 2018). Exploration of the importance of social networks in the financial decision-making process, especially investment decisions, is becoming increasingly important to research because today the internet and social media have become an important part of people's lives.

Generation's Problem

Generational differences are a concern for many studies on the financial decision-making process. Differences in traits, preferences and tendencies among generations are related to how they respond to both external and internal factors that encourage them to make the best decision. Generational differences can be reflected in various behaviors and views such as how they interpret money, welfare, happiness, success, risk, worry, financial stability, information, recommendations, marketing, investment, savings, debt, retirement, budget, lifestyle, shopping behavior or habits to the use of information technology. Young adult tend to use money not only to fulfill their personal needs, but also for their parents and to foster friendships. They also consider that money is one of the factors that cause anxiety in life (Hinduan et al., 2020). Being a sandwich generation can also affect a person's behavior, where they must be able to manage limited finances to meet the needs of the upper and lower generations. A survey conducted by Manulife Investment Management in 2024 said that 85% of respondents in Asia and even 94% of Indonesians had to sacrifice their own needs to support their parents (cnbcindonesia.com).

Generation Z also understands the importance of unexpected financial situations and overcoming challenges such as debt pressure, decreased quality of life and declining future retirement funds (Bado et al., 2023). The Center of Generational Kinetics (2017) also found that most of Generation Z has thought about retirement and influenced their income and career planning. Generation Z is referred to as an anxious generation, thinking about the future, thinking frugally and thinking that debt is a bad idea (Van den Bergh et al., 2024), which has an impact on how they manage their money today in order to retire with enough money.

Mokhtar et al., (2018) mentioned that the increasing cost of living exceeds income causing a person to invest in risky schemes. The research by OCBC NISP Financial Fitness Index 2024 found that as many as 80% of people aged 25-29 years often spend money to follow lifestyles such as buying luxury goods, expensive hobbies and traveling and sometimes the source of funds for impulsive spending is taken from emergency funds (marketeers.com). This finding also reinforces the indication that young people, even in the 30-35 age group, pay more attention to lifestyle and tend to fear of missing out or adjust to the lifestyle of those around them. The demands of higher costs and lifestyles are often not followed by an increase in income, causing individuals to seek alternative additional income in various ways, one of which is by taking advantage of investment opportunities offered by their kin or even people they do not know personally.

Millennials and Generation Z, known as the technology savvy generation, often or even always seek the opinions of friends or family before making a purchase decision. A study conducted by The Center of Generational Kinetic (2017) mentioned that 30% of Gen Z choose to seek information about brands through real consumers and 19% from online influencers. While millennials prefer information from real customers rather than online influencers. Generation Y and Z, known as the digital literate generation, must realize that today everyone can be a source of financial knowledge in various online media and social media, as if everyone is a financial expert. They must realize that information available in various media must be filtered first before making investment decisions on Ponzi schemes.

Generation Y is considered a generation of social learners (Bennett et al., 2012) so they may look at and learn from the facts, information and experiences of others who have invested in Ponzi schemes, not only from the euphoria of others who have invested successfully but also observing information about investment failures. Despite the desire for quick and easy riches, individuals in this generation may use the experiences of others as lessons to be considered when making investment decisions. Meanwhile, in Madoff's case, he obscured his deception by presenting a simple lifestyle without exaggeration. This may be effective for parents who are in a religious group that upholds simplicity.

Whereas this may not apply to the younger generation of the internet and social media era who need proof to convince them to join the scheme.

CONCLUSSION

Personality traits and social networks to which they are attached may play a role in encouraging individuals to join risky investment schemes such as Ponzi. Personality traits are also related to one's generation and may depend on how their social networks encourage behavioral tendencies. This article stresses on how the role of personality traits of individuals across generations that are also influenced by the development of the internet and the openness brought about by social media can change perspectives on the risks of Ponzi investment schemes. Social networks are no longer limited to physical ties, where individuals know their social networks well, but have led to no-border ties without being bound by demographics, religion, ethnicity, race, nationality and others. We suggests the need for research on the role of personality across generations and social networks on investment decisions to gain insight into the propensity of individuals to join risky schemes such as Ponzi.

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