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Conceptual Analysis of Financial Behavior Model Through Systematic Literature Review

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ABSTRACT

Purpose – This study aims to determine the development and novelty of the financial behavior models most commonly used by researchers to predict financial actions.**Methodology/approach –** The research was conducted using a Systematic Literature Review approach by selecting articles from the Google Scholar index without limiting the year of publication so that all articles with financial behavior studies could appear. The reports were collected using publish or perish and then analyzed bibliometrically using VOS Viewer before being explored by abstraction and content. The flow of data selection in the study was carried out using the Prism method for 981 documents.
Findings – The research results show that the study of financial behavior began in 1966 and continues to offer an increasing research trend. Models for describing the phenomenon of financial behavior continue to emerge, and one is mutually reinforcing with another. The models often discussed are the psychological model, the socialization model, the economic model, and the REMM model. **Novelty/value –** From the models discussed, a model has yet to be found to explain precisely the phenomenon of financial behavior in individual humans. These models are only alternatives, and it does not mean that one model can represent the complexity of human behavior toward finance; what is essential is the extent to which the model is consistent with the observed human behavior.

INTRODUCTION

Financial behavior is a necessary activity in which human needs can only be met by using money as a unit of the exchange rate (Mele & Canton, 2014). Structured financial behavior aims to build financial management capabilities for achieving human economic goals. This behavior refers to several models that continue to predict the most significant possibility of why humans behave, especially in financial matters. There is a general tendency in the financial behavior models seen in human behavior (Ozmete & Hira, 2011). The financial behavior carried out by individuals describes their activities in terms of managing the valuable assets they have. This financial behavior is very closely related to financial management abilities. Financial management is a series of behaviors resulting from the consideration and influence of various aspects that create complex decisions (Tang & Baker, 2016). This decision is related to the needs and priorities for managing the wealth owned, so that the financial management that is carried out reflects a person's wealth management skills in different behaviors at different times and for different reasons.

Understanding human behavior is important for understanding how organizations work, whether they are for-profit businesses in the private sector, not-for-profit businesses, or even government agencies (Jensen & Meckling, 1994). This needs to be done because humans are the main subject in organizations, and organizational dynamics are determined by human behaviors (Hayes, 1983). However, in understanding this behavior there are many disagreements in society, especially among academics, practitioners to researchers. This disagreement lies in substantial differences in the way of thinking about human nature and its potential, which includes abilities, strengths, skills, intelligence, thoughts, truth, honesty, and selfishness, to the altruism of individual humans (Ozmete & Hira, 2011). Understanding this behavioral model is essential because this theoretical model fundamentally guides our current and future understanding of financial behavior. Understanding behavioral financial models is a process of unraveling metaphorical knowledge. Each model or theory provides a different roadmap in the area of financial behavior (Kadoya & Rahim Khan, 2020; Shih et al., 2022; Tang & Baker, 2016).

Behind the importance of financial behavior, some problems continue to concern researchers in financial management. The problem is the difficulty in understanding human behavior (Pirson, 1994; Thaler, 1999; Wartiovaara, 2011). Others require better financial behavior while other people are excellent at changing their behavior. For a long time, researchers who study behavior change have been curious about how people obtain, use, and analyze information to make judgments about their financial attitudes (Jensen & Meckling, 1994). The behavioral theory tries to explain why people act as they do (Clarke, 2008). Two reasons why the financial behavior model requires ongoing analysis are; first, existing theories and methods (including education and policy) leave most of the variation in behavior outside the influence of rational (conscious) intentions. The second reason, evidence shows that human decisions are vulnerable to various environmental changes (Ramiah et al., 2015; Thaler, 1999). Various financial behavior approaches have yet to fully predict and educate the ability of good behavior-based financial management (Dolan et al., 2012).

The research was conducted through the Systematic Literature Review method. It aims to examine the relevance, development and novelty of the theory model behavior individual, which is most generally used. An interdisciplinary approach is used to describe theory and models for changing behavior, as well as application theories for behavioral finance. With outlook theory and a review of the latest literature on the model will obtain a new understanding that is very useful for developing financial behavior. Actual model research could provide information for practitioners and educators in financial counseling to help clients better, and researchers can be used to extend the design study period for behavioral processes in finance.

METHODOLOGY

This study uses a scientific, reproducible, and reliable systematic literature review process to create an objective knowledge base (Fisch & Block, 2018). The literature review that we conducted referred to the Prisma flow. This method filters the desired literature so systematic research can be carried out correctly (Page et al., 2021). This comprehensive review, combined with a content analysis of the latest literature on theories, ideas, factors, and research results on behavior in financial management, is primarily about models of financial behavior that often appear in the research literature used to predict behavior.

We use the largest database of indexed articles from Google Scholar to conduct research. We chose Google Scholar because it has a broader indexation, can include all open-access publications, provides comprehensive results, and offers broad search possibilities. An article search was conducted in October 2022. We avoided limiting the search to a specific period to retrieve all relevant papers up to date.

This study aims to examine the existence of financial behavior models. Behavioral finance studies focus on how people act in a financial setting, specifically how psychology influences financial decisions, business decisions, and financial markets (Tang & Baker, 2016). The research was conducted with the help of several software tools required in systematic literature reviews, such as Harzing Publish or Perish, VosViewer, Mendeley, and Microsoft Excel. We use Harzing Publish or Perish (PoP) to find every article relevant to the behavioral finance theme. Vosviewer to analyze the bibliography to find a series of keyword networks to find dominant research topics, gap analysis, and recommendations for future research. Mendeley for a detailed analysis of the article. Meanwhile, we use Excel to display databases and graphs.

We use several considerations in searching for articles, namely only using the keyword "financial behavior" which we use in keyword searches for research article titles and abstracts, without limiting years, and limited to publications in the form of articles and books, excluding citations and patents on the internet. Based on the PoP Software search results, there were 981 articles found on Google Scholar using the keyword "financial behavior" (Figure 1). This number is an adequate representation of the theory of behavioral finance. The database identification process is then used through the PRISMA method, as shown in Figure 2.

We found 981 data articles in the early stages of the research. Then, in identifying relevant articles, we found 240 duplicate data and 384 data that were not eligible because they needed full access and whole articles. There were 144 articles in foreign languages other than English. So that as many as 786 articles were reduced in the early stages of this SLR. Next, the results of the screening phase left as many as 147 articles which can be fully explored based on their relevance to the topic of financial behavior. The final stage is to carry out exclusion-inclusion. The articles are selected again to get the best article so that a total of 41 articles are determined to be studied and further analyzed according to the parameters of the literature review. The selected articles are considered good quality because they are selected from well-known publication sources, reputable publishers, and top citations from several international publications. Of course, they have gone through a peer review process before publication. Some of the guidelines taken in the final stages of the PRISMA method are related to the specific criteria the researcher wants. The criteria are shown in table 1.

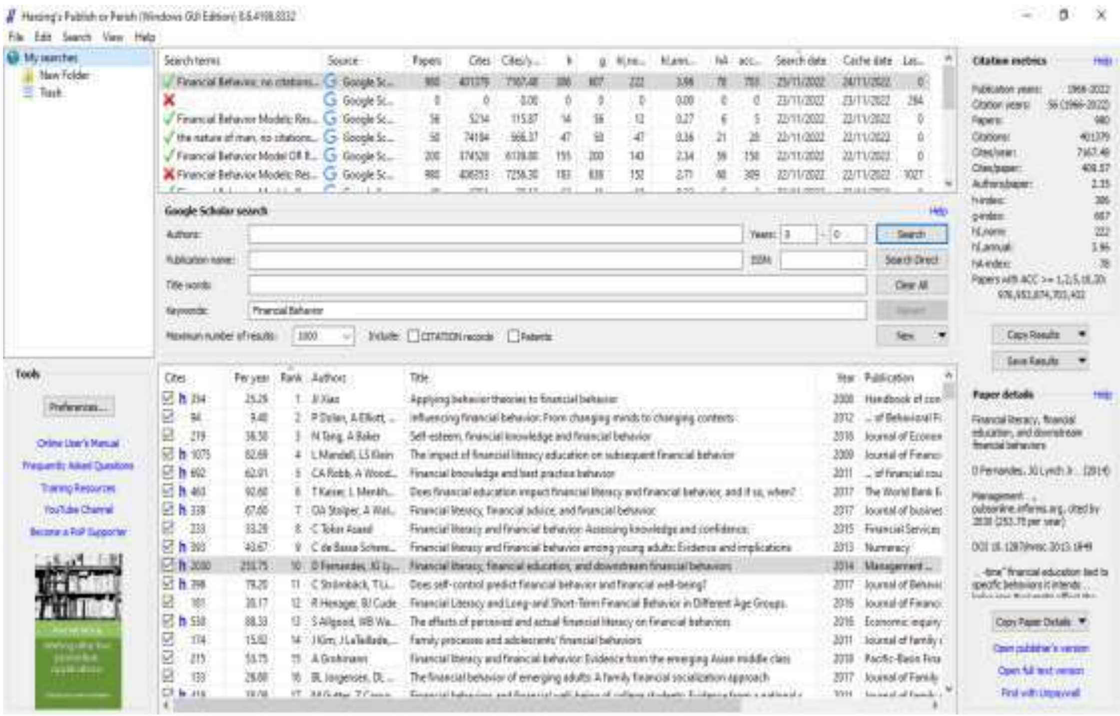

Figure 1. Publish or Perish Search Results

Table 1. Restrictions Used in Research

Indexing	Google Scholar
Keywords	Financial Behavior
Inclusion Criteria	Reputable journal; *Reputable Publisher; Top Citation*
Exclusion Criteria	SLR articles; Textbook; Studies outside the topic of financial management

RESULT AND DISCUSSION

Descriptive Analysis of Financial Behavior

Based on the results of the data search, it was found that there were 981 published articles on financial behavior studies. Between 1966 and 2022, a wide range of article publications in the form of research results and journal articles were published. The first article on the study of financial behavior was published in 1966 by Opsahl and Dunnette. This article examines financial behavior related to compensation influencing motivation (Opsahl & Dunnette, 1966). This study is a continuation of agency theory, which has previously become an exciting research topic in finance (Pepper & Gore, 2015). Then the scope of financial behavior research continues to expand into increasingly broad topics and creates many valuable findings for developing financial behavior studies (Remund, 2010).

Based on research developments and trends in financial management, the topic of financial behavior continues to grow and shows an increasing trend (Xiao, 2008b). This increasing trend can also be seen in the number of article charts on an annual and every-decade basis (Figure 2). A significant increase occurred in 2000, which began with a drastic increase in the number of studies on financial behavior. 2013 was in the spotlight because as many as 75 articles were published in one year. Based on the data we have obtained, financial behavior will continue to be an attractive research option in financial management, the number of which will continue to increase in the years to come.

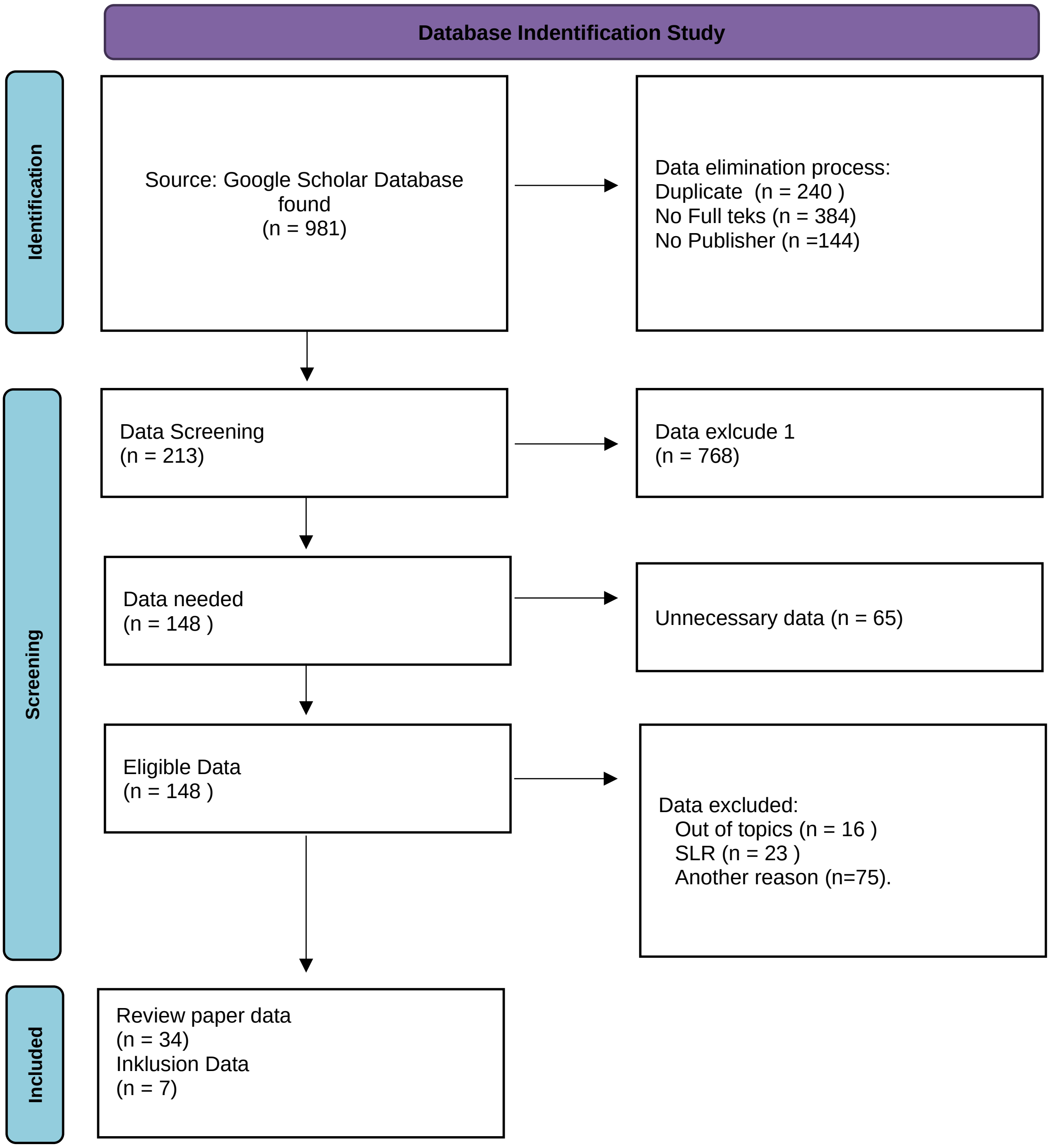

Figure 2. Prisma Flow Diagram

No fewer than 152 publishers have published research articles and books related to financial behavior. Elsevier has 187 articles on financial behavior, Wiley Publishing Online has 99 articles, Springer has 59 articles, and Taylor Francis and Sagepub have 40 and 41 articles on financial behavior, respectively.

A total of 981 articles were then analyzed bibliometrically using Vosviewer to find out keyword networks and other important things related to financial behavior. Figure 4 shows an overview network analysis in the form of a bibliometric analysis output using Vosviewer; an overview network is an analysis output based on keywords from the 981 articles collected. The analysis results show that financial behavior is connected with 65 keyword items. The most frequently researched topic is the relationship between behavioral finance and human nature, including human behavior, resources, money, financial management, education, financial performance, knowledge, and several other items. Items related to financial behavior are divided into three main clusters, characterized by different colors in the Vosviewer network.

Figure 3. Financial Behavior Research Trends

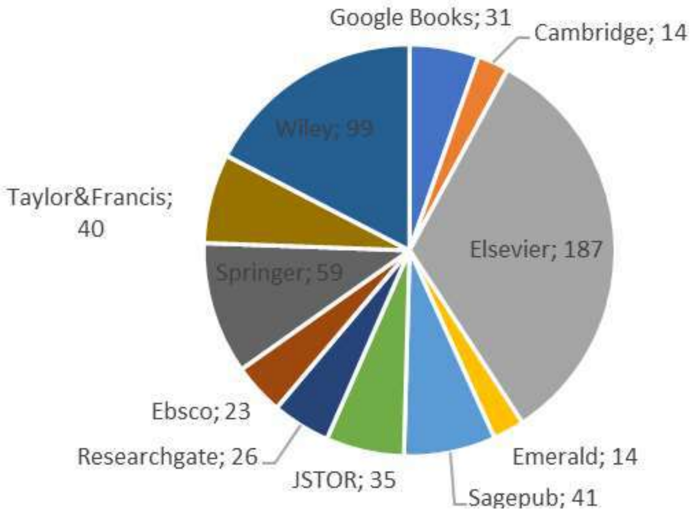

Figure 4. Behavioral Finance Article Publishers

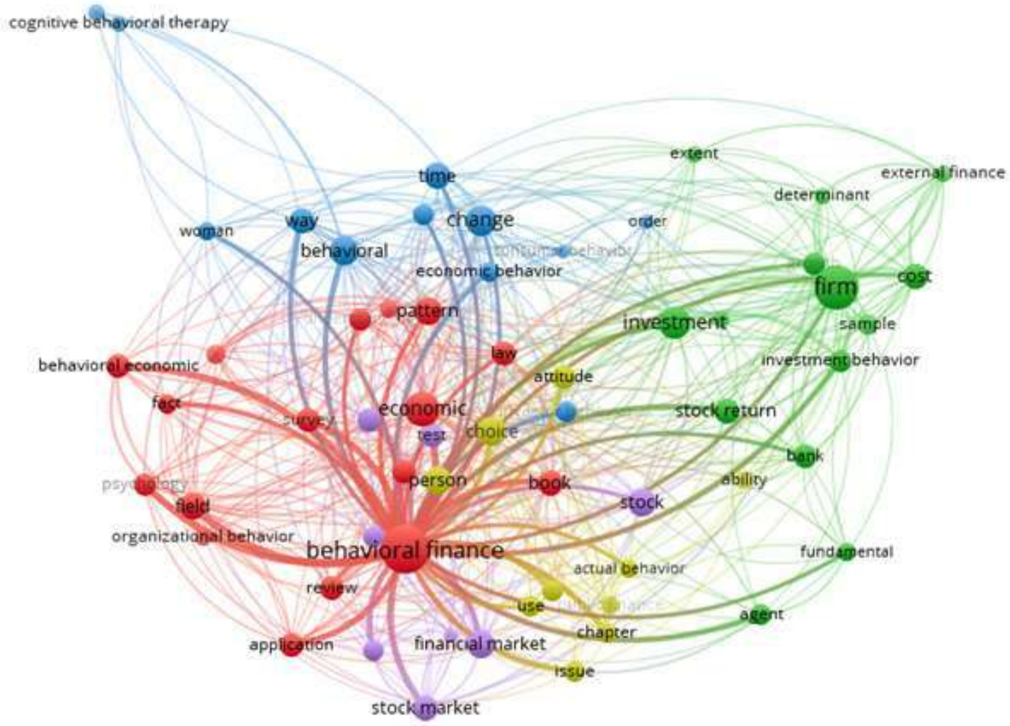

Figure 5. Overview Network VosViewer Keyword Research

Based on Figure 5. the screening that has been carried out with the help of VOSviewer, financial behavior can be seen to have 4 clusters. Next we read the abstracts and filtered the literature based on predefined inclusion and exclusion criteria. Based on the results of this study, we also found 4 theoretical clusters, so we summarized them in table 2.

Based on the results of our analysis of the literature, we found many behavioral models that explain human nature in terms of financial decisions, so far no model has been found that can specifically explain the phenomenon of financial behavior that occurs in individual humans. However, from various social phenomena that occur, these behavioral models intersect. There is no problem if there are more and more models of behavior. Of the many models that have emerged to generalize financial behavior, the most important is the extent to which the model is consistent with the observed human behavior. If the model's tendency is only valid in a limited area and place then the model can be ignored. For this reason, while we still need many models to describe general traits that characterize human behavior, the greater detail limits the ability to explain models because individual people are so different.

Table 2. Result Clusters

Cluster	Financial Behavior Model Relations
A	Psychological Models 1. Transtheoretical Models Change (TTM) 2. Models of Health Belief (HBM) 3. Theory Reason Action or Plan Behavior Models (TRA/TPB) 4. Model of Risk Reduction (RRM)
B	Sociological Model 1. Role Theory Models (RT) 2. Socialization Theory Models (ST) 3. Community Organization Theory Models (COT)
C	Economic Models 1. Game Theory Models (GT) 2. Social Marketing Theory Models (SMT) 3. Models of Consumer Information Processing Theory (CIP)
D	REMMS model 1. Resourcefull Models 2. Evaluative Model 3. Maximize Model

Based on Table 2 the results of our analysis of the literature, we found many behavioral models that explain human nature in terms of financial decisions, so far no model has been found that can specifically explain the phenomenon of financial behavior that occurs in individual humans. However, from various social phenomena that occur, these behavioral models intersect. There is no problem if there are more and more models of behavior. Of the many models that have emerged to generalize financial behavior, the most important is the extent to which the model is consistent with the observed human behavior. If the model's tendency is only valid in a limited area and place then the model can be ignored. For this reason, while we still need many models to describe general traits that characterize human behavior, the greater detail limits the ability to explain models because individual people are so different. We will briefly present a discussion of each model as follows:

Thematic Analysis of Financial Behavior A. Cluster Theory of Psychological Models

1. Transtheoretical Model of Behavioral Change/Stages of Change (TTM)

The Transtheoretical Change Model (TTM) is frequently employed in the health industry to assist individuals in ceasing harmful behaviors and/or acquiring healthy ones (Xiao, 2008). TTM was created by analyzing real-world occurrences and incorporating existing psychotherapy concepts. It incorporates variables of change from many existing counseling theories. The main construction of TTM includes the stages of change, including process and maintenance. The process entails a desire to change and some behavior, which is usually minor and often has limited success. Maintenance is where people work to prevent relapse and consider the gains achieved in the action phase (Xiao, 2008).

The Transtheoretical Model, initiated by the theory of Prochaska and DiClemente (1982), is a tool that evaluates and changes financial behavior. TTM has been applied to financial behavior change by Xiao (2001, 2004) and Shockey & Seiling (2004) in the 2000s. They use the critical constructs of TTM, which include the stages of change, decision balance, self-efficacy, and change processes. The application of TTM to changing financial behavior is a process that involves five integrated stages, namely: (i) awareness of the problem and the need to change financial behavior; (ii) motivation to make changes in financial behavior; (iii) development of skills to prepare for changing financial behavior; (iv) early adoption of new financial activities or behaviors; and (v) maintenance of new financial activities and integration into lifestyles (Shockey & Seiling, 2004; Velicer et al., 2005).

2. Health Belief Model (HBM)

The Health Belief Model (HBM) is a part of the psychological model because it is oriented toward individual attitudes and beliefs. In the early 1950s, HBM was used to predict and explain health behavior because people were less active in health activities (Rosenstock et al., 1988). This model proposes that the likelihood that a person will adopt a health-related behavior results from their perception of a threat to their health and their belief that the recommended behavior will reduce this threat. People understand the seriousness of many health conditions but often do not see themselves as vulnerable. Overcoming these perceptions is a prerequisite for a healthy lifestyle. HBM addresses the importance of designing educational programs that influence learner perceptions. The model suggests that internal and external cues, such as body state and environmental factors, can also encourage or inhibit health-promoting behaviors (Davinson & Sillence, 2014).

HBM can be used to help surface messages about money that convince people to make intelligent choices. For example, HBM can create effective financial management messages about risks, loans, and credit. Before someone can accept their dire financial situation and look for ways to deal with it, they need to confirm that they are financially risky. HBM talks about how important it is to create educational programs that change people's thinking. People know how dire many financial situations can be, but they do not always see themselves in danger. A proper financial management process must go through these ideas.

3. Theory of Reasoned Action/Theory of Planned Behavior (TRA/TPB)

The theory of Reasoned Action (TRA) has been used to explain various health-related behaviors, such as losing weight, smoking, drinking too much, and doing other things that harm health. TRA says there is a strong relationship between the intention to perform a particular behavior and the actual action of that behavior (Rahmayanti et al., 2021). TRA is based on two basic assumptions: (i) behavior is controlled by choice, and (ii) humans are rational. From the TRA point of view, we act in a certain way because we choose, and we choose and plan our actions using a rational decision-making process (Scafidi & Skimmy, 2016).

TRA was created to predict behavior based on intention, and it shows that beliefs, attitudes, intentions, and behavior are related in an almost mathematical way. The theory of Planned Behavior (TPB) is a change in TRA that adds the idea that people feel they have control over their actions (Xiao, 2008). The primary purpose of TRA is to be able to predict behavior. This model says that the intention to do something influences how it is done (Koropp et al., 2014). Three main things influence intention: subjective norms, attitudes, and self-efficacy. The subjective norm depends on what a person thinks of his significant other about his ability to perform the behavior. Values can be used to describe how people feel. That is, a person develops specific values about how to act. Beliefs also influence subjective norms and attitudes, which are two things that affect intentions (Shih et al., 2022).

The theory of Reasoned Action (TRA) can be applied to predicting financial behavior to understand and predict the determinants of financial behavior. The concept of perceived behavioral control is similar to self-efficacy - one's perception of one's ability to perform financial behaviors. Normative and behavioral beliefs can help develop financial messages that persuade people to make sound financial decisions.

4. Risk Reduction Model (RRM)

The Risk Reduction Model (RRM) was introduced in 1990. This model provides a framework for explaining and predicting individual behavior change efforts, especially concerning HIV/AIDS (Ozmete & Hira, 2011). RRM is said to be a model containing three stages, RRM incorporates several variables from other behaviour change theories, including the health belief model (HBM), "efficacy" theory, emotional affect, and interpersonal processes (Xiao, 2008).

The risk reduction model focuses on social and psychological factors hypothesized to influence

1. high-risk labelling behavior as a problem,
2. committing to changing high-risk behavior, and
3. seeking and implementing solutions directed at reducing high-risk activities. Based on this hypothesis, RRM is very relevant and can be used to explain and predict efforts to change individual behavior, especially in financial management.

B. Sociological Theory Clusters

1. Role Theory

According to role theory, individual and other people's expectations influence a person's behavior. The set of standards or conventions that serve as guidelines for behavior is called a "role." In reality, role theory is predictive. This suggests that most of a person's behavior can be predicted if we know the role expectations for a particular job. Role theory claims that roles and behavior are mutually exclusive. Some research results claim that role theory is related to gender and that people adjust their attitudes, beliefs, and behaviors to suit their gender roles. For example, women are more likely to be quiet and cooperative than men, who are perceived as aggressive and competitive; gender stereotypes and gender roles are highly intertwined (Ozmete & Hira, 2011).

The application of role theory to changing financial behavior includes the process of learning finance. Evidence of gender differences in financial literacy can be found in much of the literature. Gender differences often indicate the level of financial literacy. Women are said to have more financial anxiety and lower levels of financial confidence. In contrast, men significantly consider financial aspects (Hira & Mugenda, 2000). Women are more comfortable learning about finances privately. At the same time, men are more comfortable talking about it with friends, family, or co-workers. The results of research on gender are a research topic that continues to grow with findings that are useful for financial behavior because the gender role dichotomy is a social issue that affects all communities (Edwards et al., 2007). One example of how role theory is used to change financial behavior is through a functionalist approach to engaging in low-risk financial behavior. Another illustration is the relationship between monetary behavior and social structure.

2. Socialization Theory

The concept of socialization includes acquiring knowledge, skills, and values that enable an individual to live and interact with others in the social system. The theory emphasizes the transmission of social norms during childhood and youth by society's main socializing agents. Behavior is strongly influenced by gender roles when culture supports gender stereotypes and forms strong expectations based on those stereotypes (Kadoya & Rahim Khan, 2020; Shih et al., 2022). Socialization theory suggests that perceived gender roles depend primarily on the social roles we fulfil. People who play stereotypical female characters are thought to be feminine in gender position. Socialization theory is most often used in financial behavior research.

According to Danes (1994), financial socialization includes much more to people than learning how to do well in the market. It is the process of obtaining and establishing standards, norms, information, beliefs, attitudes, and behaviors that support one's financial security and general well-being (Pirson, 1994). Parents teach their children how to handle money by showing them, encouraging them, letting them practice, and involving them (Ozmete & Hira, 2011).

3. Community Organization Theory

Community is one aspect that also greatly influences financial behavior, competence in the community can direct a person's behavior (Pirson, 1994). Community competency, when compared, is self-efficacy plus behavioral capability at the community level. Included in this competency are self-confidence and skills to solve problems well. Problem selection is about finding "winnable battles" to focus on, and critical awareness actively seeks the root causes of problems. Both involve getting people involved and making everyone ready for change (Thaler, 1999).

Community Organization Theory (COT) is a network of how people interact with one another. Cause and effect can be used to change the way people act with their money. Too much conformity and rigidity lead to creativity, personal growth and motivation to change financial behavior. In this process, people can overcome their money problems by getting factual information from active community members. Many organizations use coalition structures to involve community members in exploring common behavioral problems or goals. COT is based on how people work together to solve problems. If they are involved, people can solve their money problems and stop doing risky things with their money (Ozmete & Hira, 2011).

C. Clusters of Economic Model Theory

1. **Game Theory**

Game theory uses mathematics to determine how people act in strategic situations. It was first created to study competition, but now it can be used to study various interactions. Most of the research in game theory is about how people work together in groups. Based on the literature review, three sections are derivatives of game theory: decision theory, general equilibrium theory, and mechanism design theory (Ricciardi & Simon, 2000; Wasiluk et al., 2018).

Decision theory is the most popular theory, which says that preferences for risky options can be explained based on the expected value of the maximized utility function (Mele & Canton, 2014). General equilibrium theory is a game theory that focuses on how trade and production affect each other. Meanwhile, mechanism design theory looks at questions such as arranging compensation and wage agreements that spread risk while maintaining incentives (Pirson, 1994). Based on a literature review, it has been found that women cooperate more in games than men. Women are more likely to work together when both men and women are in a group. Men are more aware of experimental settings than women (Hira & Loibl, 2008).

Game theory can be a tool to explain and predict how individuals deal with financial problems. Real life is simulated as a game that has five essential elements: (i) players, or decision-makers, (ii) strategies available to each player, (iii) rules governing player behavior, (iv) outcomes, which are the consequences of confident choices made, and (v) likely, predictions that appear for each player (Xiao, 2008b).

2. **Social Marketing Theory**

Social marketing is another method used to get people to change their ways. Social marketing is based on marketing principles and focuses on four main areas: This approach is more of a framework than a theory of changing people's behavior. This theory sees people as "consumers" who may "buy" an idea or idea if proper sales techniques are used. Then, it is assumed that people will change their behavior if they "accept" the idea. From the perspective of behavioral finance, social marketing is based on the idea that people will change their behavior if they get something in return (Remund, 2010). For this exchange to occur, it is necessary to determine the benefits for each consumer and the appropriate course of action. This system will only work if communities and/or individuals have decided on the essential benefits and behaviors and built relationships between them (Ricciardi & Simon, 2000).

Social marketing is a promising framework for planning and implementing behavior change, thus social change. The theory is the systematic application of marketing to achieve specific behavioral goals for social good (Tang & Baker, 2016). Social marketing identifies consumer wants and needs and then develops ways to satisfy them. This can be applied to promote, for example, goods and services, make society avoid defects and thereby promote consideration of the welfare of society as a whole.

3. **Consumer Information Theory**

People need the information to change their habits and make them better. The main concepts underlying the consumer information process (CIP) are: (i) each person can only handle so much information; (ii) each person can only process so much information at once.

They combined information into "chunks" to make it easier to use. They created decision rules to help people make choices faster and easier. People will use information if they can find it, find it helpful, and it is new and easy to use. The formative evaluation uses CIP ideas to determine whether program materials are exciting and easy for the target audience (Brunner & Meckling, 1977; Scafidi & Skimmy, 2016). (Brunner & Meckling, 1977; Scafidi & Skimmy, 2016).

The results of research on the theory of consumer information processes are described by Bettman (1970) and Clarke (2008); these researchers agree that the consumer information processing process consists of five essential aspects, including the following: i). Information Processing Capacity relates to the amount of information a person can learn, use, and remember. ii). Information Search; The process of obtaining and assessing information; influenced by motivation, attention, and perception. iii). Decision rules contain general rules created and used to help people choose between options. iv). Internal feedback is based on the results of the choices, which can be used to make future choices. v). Information Environment: How much information is there, where is it located, how easy is it to read, and is it relevant? (Ozmete & Hira, 2011)

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D. Cluster Theory of REMMS Model

Another model that is a predictor of financial behavior is the REMMs model. The REMMs are a concept from the human nature model, which has the characteristics of Resourceful, Evaluative, & Maximizing Models (Jensen & Meckling, 1994). This model was initiated by Jensen & Meckling in 1994. According to this theory, humans are individuals who have all the potential because of their minds, then always try to evaluate alternatives, and finally maximize all possibilities (Wartiovaara, 2011; Xiao, 2008). The concept underlying this theory includes four assumptions, namely: (i) each individual is a reasonable person, (ii) each individual is an evaluator, (iii) each individual has unlimited desires, (iv) each individual is a maximizer (Milosevic, 2016; Wasiluk et al., 2018).

Assumption I: Individuals are intelligent, so individuals are creative. Individuals can understand environmental changes, predict consequences, and respond by creating new opportunities. Although an individual's set of opportunities is limited at any given moment by his knowledge and the state of the world, those limits do not change. Humans are not only able to learn about new opportunities, but they are also involved in creative activities that expand their opportunities in various ways.

Assumption II: Every individual is an evaluator, so the individual is concerned with all things that intersect with him, such as knowledge, independence, the suffering of others, environment, honor, interpersonal relations, status, peer approval, group norms, culture, wealth, rules of behavior, weather, music, art, and so on. Then because, as an evaluator, individuals will always have alternatives to choose from, REMM is always willing to make trade-offs and substitutions. Each individual is always willing to give up a small number of certain goods for several other goods whose value and benefits are considered greater.

Assumption III. The desires of each individual are unlimited. Suppose it refers to things or goods considered positive (results of the REMM assessment). In that case, individuals will prefer to have these items in large quantities. Therefore REMM cannot be satisfied. He always wants more than a few things, be it material goods like houses, cars, collectibles, etc; or non-material goods such as feelings of pleasure, desire for solitude, honor, fame etc.

Assumption IV. Every individual is a maximizer. The individual acts to enjoy everything to the highest degree. If faced with choices, the individual will choose the option that, according to the individual has the maximum value. Surprisingly, an individual will always be limited in his ability to satisfy his desires. Wealth, time, and the laws of physical nature are essential constraints that affect the opportunities available to each individual. The individual is also limited by the limits of his knowledge of goods and opportunities; their choice of goods or actions will reflect the cost of acquiring the knowledge or information necessary to evaluate those choices.

CONCLUSION

Many theories have been capable of predicting financial behavior for a long time. Publications on financial behavior have been found to have developed since 1966. Various studies on financial behavior with various study subjects have been conducted to investigate essential factors in financial decision-making. At the beginning of its development in the literature, there were many studies between financial knowledge and education on individual financial behavior. On the other hand, research in the psychological aspect is developed as an introductory study that explains financial behavior.The general psychological understanding of the financial aspect examines humans as objects and sees behavior as a personal interaction with their environment (Hayes, 1983).

However, more than a psychological approach is needed to answer many questions apart from this. Another model is needed to explain the phenomenon of financial behavior (Tang & Baker, 2016). Systematically, various theories can discuss changes in financial behavior in addition to education, psychology and social behavior, including sociological perspectives, economic theory, political models, and REMMs .

Based on contemporary theoretical developments, conceptual models for behavior change were initiated by Prochaska and DiClemente's Transtheoretical change model (1982). Janz and Becker's Health Belief Model (1984), Azjen and Fishbein's Reasoned Action Theory (1980) and, Risk Reduction Model, Bandura's Social Cognitive/Learning Theory (1989) have been applied in a variety of disciplines, including behavioral finance. Then the second wave regarding conceptual discussion of behavioral models was carried out by the sociological model theory group (role theory, socialization theory, and community organization theory). This sociological model theory is the theory most often used to explain behavior models, even though its position is weak. The development of the sociological theory was then followed by economic behavior and political models consisting of game theory, social marketing theory and consumer information processing theory. The development of models to describe the phenomenon of financial behavior continues to grow, and one model continues to have a mutually reinforcing attachment. Like the view of the natural human behavior model which assumes that humans are individuals who have intellectual resources, constantly evaluate, and take chances. This last model is Resources, Evaluation, Maximizing Models (REMMs).

These alternative models are only a subset of those that can predict human behavior (which is almost always implicit). It does not mean that using only one model can describe human behaviour. This is expressed because of the concern that the model needs to represent the complexity of human behavior towards finance. The model investigated in this paper does not perfectly describe what economists, sociologists-psychologists, and other experts in fields such as politics use to describe what is used in their field of study. However, the discussion of theories and concepts in each model is carried out on a representative basis to ensure the comprehension of theories and concepts that can be used to predict financial behavior.

REFERENCES

Brunner, K., & Meckling, W. H. (1977). The Perception of Man and the Conception of Government. *Journal of Money, Credit and Banking*, *9*(1), 70. https://doi.org/10.2307/1992000

Davinson, N., & Sillence, E. (2014). Using the health belief model to explore users' perceptions of "being safe and secure" in the world of technology mediated financial transactions. *International Journal of Human Computer Studies*, *72*(2), 154–168. https://doi.org/10.1016/j.ijhcs.2013.10.003

Dolan, P., Elliott, A., Metcalfe, R., & Vlaev, I. (2012). Influencing financial behavior: From changing minds to changing contexts. *Journal of Behavioral Finance*, *13*(2), 126–142. https://doi.org/10.1080/15427560.2012.680995

Edwards, R., Allen, M. W., & Hayhoe, C. R. (2007). Financial attitudes and family communication about students' finances: The role of sex differences. *Communication Reports*, *20*(2), 90–100. https://doi.org/10.1080/08934210701643719

Fisch, C., & Block, J. (2018). Six tips for your (systematic) literature review in business and management research. *Management Review Quarterly*, *68*(2), 103–106. https://doi.org/10.1007/s11301-018-0142-x

Hayes, D. C. (1983). Accounting for accounting: A story about managerial accounting. *Accounting, Organizations and Society*, *8*(2–3), 241–249. https://doi.org/10.1016/0361-3682(83)90032-6

Hira, T. K., & Loibl, C. (2008). Gender differences in investment behavior. *Handbook of Consumer Finance Research*, 253–270. https://doi.org/10.1007/978-0-387-75734-6_15

Hira, T. K., & Mugenda, O. (2000). Gender Differences in Financial Perceptions, Behaviors and Satisfaction. *FPA Journal*, *13*(2), 86–93.

Jensen, M. C., & Meckling, W. H. (1994). The Nature of Man. *Journal of Applied Corporate Finance*, *7*(2), 4–19. https://doi.org/10.5840/acpaproc19512527

Kadoya, Y., & Rahim Khan, M. S. (2020). Financial literacy in Japan: New evidence using financial knowledge, behavior, and attitude. *Sustainability (Switzerland)*, *12*(9). https://doi.org/10.3390/su12093683

Koropp, C., Kellermanns, F. W., Grichnik, D., & Stanley, L. (2014). Financial Decision Making in Family Firms: An Adaptation of the Theory of Planned Behavior. *Family Business Review*, *27*(4), 307–327. https://doi.org/10.1177/0894486514522483

Mele, D., & Canton, C. G. (2014). The Homo Economicus Model. In *Human Foundations of Management* (Issue 4, pp. 41–45). https://doi.org/10.24158/fik.2020.4.7

Milosevic, D. (2016). The Nature of Man. *Journal of Applied Corporate Finance*, *7*(2). https://doi.org/10.5840/acpaproc19512513

Opsahl, R. L., & Dunnette, M. D. (1966). Role of financial compensation in industrial motivation. *Psychological Bulletin*, *66*(2), 94–118. https://doi.org/10.1037/h0023614

Ozmete, E., & Hira, T. (2011). Conceptual analysis of behavioral theories/models: Application to financial behavior. *European Journal of Social Sciences*, *18*(3), 386–404.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *The BMJ*, *372*. https://doi.org/10.1136/bmj.n71

Pepper, A., & Gore, J. (2015). Behavioral Agency Theory: New Foundations for Theorizing About Executive Compensation. *Journal of Management*, *41*(4), 1045–1068. https://doi.org/10.1177/0149206312461054

Pirson, M. (1994). *Chapter 2 Understanding Human Nature*. 1–21.

Rahmayanti, P. L. D., Widagda, I. G. N. J. A., Yasa, N. N. K., Giantari, I. G. A. K., Martaleni, Sakti, D. P. B., Suwitho, & Anggreni, P. (2021). Integration of technology acceptance model and theory of reasoned action in predicting e-wallet continuous usage intentions. *International Journal of Data and Network Science*, *5*(4), 649–658. https://doi.org/10.5267/j.ijdns.2021.8.002

Ramiah, V., Xu, X., & Moosa, I. A. (2015). Neoclassical finance, behavioral finance and noise traders: A review and assessment of the literature. *International Review of Financial Analysis*, *41*, 89–100. https://doi.org/10.1016/j.irfa.2015.05.021

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, *44*(2), 276–295. https://doi.org/10.1111/j.1745-6606.2010.01169.x

Ricciardi, V., & Simon, H. K. (2000). *What is Behavioral Finance ?* 1–9.

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social Learning Theory and the Health Belief Model. *Health Education & Behavior*, *15*(2), 175–183. https://doi.org/10.1177/109019818801500203

Scafidi, B., & Skimmy, B. (2016). *THE EFFECTS OF PERCEIVED AND ACTUAL FINANCIAL LITERACY ON FINANCIAL BEHAVIORS*. *54*(1), 675–697. https://doi.org/10.1111/ecin.12255

Shih, H.-M., Chen, B. H., Chen, M.-H., Wang, C.-H., & Wang, L.-F. (2022). A Study of the Financial Behavior Based on the Theory of Planned Behavior. *International Journal of Marketing Studies*, *14*(2), 1. https://doi.org/10.5539/ijms.v14n2p1

Shockey, S. S., & Seiling, S. B. (2004). Moving into action: Application of the transtheoretical model of behavior change to financial education. *Journal of Financial Counseling and Planning*, *15*(1), 41–52.

Tang, N., & Baker, A. (2016). Self-esteem, financial knowledge and financial behavior. *Journal of Economic Psychology*, *54*, 164–176. https://doi.org/10.1016/j.joep.2016.04.005

Thaler, R. H. (1999). Perspectives: The end of behavioral finance. *Association for Investment Management and Research*, 12–17.

Velicer, W. F., Fava, J. L., Prochaska, J. O., Norman, G. J., & Reading, C. A. (2005). *Detailed Overview of the Transtheoretical Model*. http://www.uri.edu/research/cprc/TTM/detailedoverview.htm

Wartiovaara, M. (2011). Rationality, REMM, and Individual Value Creation. *Journal of Business Ethics*, *98*(4), 641–648. https://doi.org/10.1007/s10551-010-0643-6

Wasiluk, A. K., Giegiel, A. W., & Zalesko, M. (2018). The Evolution of the Economic Man. From Homo Oeconomicus to Homo Moralis. *Gospodarka Narodowa*, *1*(1), 33–57.

Xiao, J. J. (2008). Applying behavior theories to financial behavior. *Handbook of Consumer Finance Research*, 69–81. https://doi.org/10.1007/978-0-387-75734-6_5

