

## **RISKS ACCOMPANIED BY FINANCIAL TECHNOLOGY (FIN TECH) ADOPTION: THEORETICAL RESPONSE ON RISKS MITIGATION AND DECISION IMPLICATIONS**

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### **Abstract**

The study objective is focusing on delivering theoretical knowledge and understanding through focusing on governing human behavior towards responding and mitigating of the perceived risks in the process of adoption Financial Technology (Fin Tech), and further drawing theoretical decision making mechanism and implications on the perceived risks for facilitation Financial Technology adoption process and financial investments management at large in the financial services industry domain. Methodologically the study employed theoretical approach to accomplish the desired goals of the study. The study findings revealed that there is significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, in the occasion theoretical evidence proving the profoundly relationship between risk and human behavior. Towards mitigating the identified potential risks for facilitation the Financial Technology (Fin Tech) adoption process, indispensably the focus must be on governing the human behavior to mitigate the risks and facilitate the Financial Technology adoption process. From that regard, the study proposed the new model for risk response and mitigation for the Fin Tech adoption perceived risks while the mitigation process is well accompanied and supported by the theoretical arguments. Ultimately the study drawn theoretical decision making mechanism and implications of the perceived risks.

**Keywords:** Financial Technology (Fin Tech); Fin Tech Adoption Risks; Risks Mitigation: Theoretical Response

### **Introduction and Theoretical Background**

#### **Introduction**

The emerging of Financial Technology is profoundly accompanied by technological benefits and potential risks in the adoption process. From this point of view, the study focusing on developing theoretical knowledge and understanding regarding mitigation of the received risks while rigorously governing the human behavior towards smoothly facilitation the Financial Technology adoption process for the prosperity of Financial Technology, financial Investment management, and the entire financial services industry domain. Three theories were profoundly employed in explicating the entire notion of the study (The Choice Theory, Theory of Reasoned

Action, and The Expected Utility Value Theory). In that context of theoretical point of view in explicating the entire notion of the study, the theory of choice profoundly developed and proving the relationships between the risk and the behavior. Furthermore, the theory of reasoned action explicating the narrative of governing the human behavior in responding and mitigating of the perceived risk while focusing on smoothly facilitation of the Financial Technology (Fin Tech) adoption process. Ultimately, the Expected utility value theory demonstrating the decision making mechanism and implications for the perceived risks in the process of adoption Financial Technology (Fin Tech).

The Financial Technology (Fin Tech) symposium and emerging has become the inevitable and indispensable in the financial services industry domain considering the fact that it has accompanied by perennial technological benefits such as elimination of the intermediary (middle man) costs in undertaking the financial services transactions. However some researchers and practitioners pose skeptical view point and some doubts that financial technology (Fin Tech) is not the efficacy remedy solution for confronting the recent financial services industry challenges because of the potential risks accompanied by financial technology in the adoption process.

The meaning of financial technology basically coming from the narrative of regarded financial technology which plays the role of taking out the costs of engaging the financial intermediaries in performing the financial transactions, (Das 2019). Fin Tech is primarily the product of the word Financial Technology. The emerging of Fin Tech is triggered by the recent sophisticated of information technology which accompanied by the innovation of financial services to bring out Fin Tech, (Ryu 2018). Globally, according to the report of EY Financial Technology Adoption Index, explicating that the Financial technology is about 33% adopted in the year of 2017, (Gerlach and Lutz 2019). The recent proliferated growing and advanced of Information technology triggered the new and innovative financial services termed as Financial technology (Fin Tech), (Ryu 2018). The financial technology developments triggered the efficient information accessibility, removing of the middle agents, reduction of costs, and escalating transparent in financial transactions, (Ryu 2018). Exemplifying the pragmatic examples of fin tech services are such as mobile payment and remittances and personal finance management, (Ryu 2018).

Considering the theory of reasoned action, the argument is; the adoption of the financial technology is primarily depending on the customers behaviors believes which are basically influence customer attitudes towards adopting the fin tech, (Ryu 2018). Towards the narrative of establishing and adopting financial technology (Fin Tech) as the core driver for re shaping financial systems, Institution theory establishing the basic conceptual ground explicating the scenarios arguing the possibilities of learning and building the ways of doing things or maintaining and further proceeding with the old one, (Teigland et al. 2018). Introduction of financial technology in the financial market triggered differences in perception among researchers and practitioners, in the occasion some researchers and practitioners believe that Fin Tech is the suitable driver for re shaping financial system, others remain with spectacle and doubts emphasizing that financial technology is not suitable driver of financial system due to the accompanied dramatic number of risks in the adoption process, (Ryu 2018). Exemplifying

financial technology emerging and adoption, the pragmatic example is China, where by amid the period from 2017 to 2019, China experience the proliferated growing number of offline QR Code scanning transactions, (Hong, Lu, and Pan 2020). Considering the theory of reasoned action, the argument is; the adoption of the financial technology is primarily depending on the customers behaviors believes which are basically influence customer attitudes towards adopting the fin tech, (Ryu 2018). The adoption of the technology basically depends on the customers measurement of risks and benefits accompanied by the respective technology, meaning that in the moment the benefits are greater compared to the risks associated with the adoption of the respective technology, customers are determined to adopt the introduced financial technology, (Ryu 2018).

The fundamental barrier towards adopting the Financial Technology is the perceived risks accompanied the Fin Tech adoption process, the perceived risks in adoption of the Fin Tech are such as financial risks, regulation risks, legal risks, and operational risks, (Ryu 2018). In the process of adopting financial technology it has been emphasized that the perceived risks is among main key factors determining the decision making whether to adopt or not adopt the Fin Tech, (Hu et al. 2019). Towards radical adoption of financial technology to govern and Sharpe the entire financial services industry, literature evidence emphasizing that, the significant challenge for the policy makers is to escalate the benefits of the Fin Tech while rigorously mitigating and reducing the identified risks which are profoundly accompanied by the emerging of the Fin Tech, (Ehrentraud et al. 2020). Considering the proliferated growing number of risks in adopting the financial technology, (Coetzee 2020), emphasizing that, it is inevitable and indispensably considering regulating and channeling into proper directions the identified number of risks including financial risks, economic risks, operational , and regulatory risks. Perceived risk might be explicated as the customers understanding and perception regarding the precarious and risks accompanied on the decision for adopting the Financial technology , (Ryu 2018). Exemplifying the pragmatic example of decision in adoption of Fin Tech in the growing number of risk evidences, (Coetzee 2020), explicating that South African banks decision in adopting Fin Tech was primarily based on mind set decision of the perceived Fin Tech Risks.

### **Theoretical Background**

In the process of mitigation of identified potential risks which are accompanied by the emerging of Financial Technology (Fin Tech), and further facilitating the smoothly adoption of the Financial Technology (Fin Tech) considering the technological innovations benefits are more meaningful and indispensable, the contemporary study identified and developed three theories (The Theory Of Choice, The Theory Of Reasoned Action, and The Expected Utility Value Theory) to address the entire notion of the study. The Theory of Choice developed the study ground through proving the profoundly relationship between the risk and the human behavior. Thereafter, The Theory Of Reasoned Action deliver the theoretical knowledge and understanding for the narrative of human behavior intention and attitudes against the perceived Fin Tech Adoption risks towards facilitating the smoothly adoption of the new technology (Fin Tech). Ultimately, The Expected Utility Value Theory concludes the decision making mechanism and implication to the study from the perceived Fin Tech adoption risks.

The theory of choice in precarious conditions poses the indispensable profoundly linkage between human behavior attitudes, the perceived risk, and the context of undertaking decision. The theory explicitly explore that human behavior and attitudes against the respective perceived risk is the fundamental determinant of decision making in the uncertainty and risk environment, (Guiso and Paiella 2004). The theory of choice explicating that the differences of human behavior attitudes towards risk aversion on a particular course of action determine the entire content of decision making to be undertaken, (Guiso and Paiella 2004). Research conducted by, (Guiso and Paiella 2004), focused on investigating household consumers attitudes and behaviors regarding buying the risky asset, theoretical results of the research revealed that, the profoundly relationship between the risk and personal behavior and attitudes plays the significant role of the kind of decision to be implemented by the consumers. In a different theoretical perspective, decision theory explicating the narrative of personal behavior in the occasion of confronting non-strategic precarious (uncertainty), meaning that the uncertainty environment is triggered by the nature circumstances such as illness, (Bernoulli 2005). In a narrow approach, decision theory as well highlight the constructs of choices and decision as primarily related with risk and human behavior, (Bernoulli 2005). In highlighting the theoretical constructs building the profound linkage of human behavior and the respective risk, the prospect theory explicitly pose that commitment, the theory is describing the narrative of the risks occasions in relations to the human behavior, (Stracca 2002). Towards explication the origin of risk aversion, (Zhang, Brennan, and Lo 2014), solidify the profound relationship between the risk and human behavior through emphasizing that, the narrative of risk aversion is among of the indispensable paradigm of the human behavior.

The ground of accepting new technology whether it has accompanied with risk or not is well constructed through the theory of reasoned action, while the decision mechanism towards acceptance of the respective technology is well explicated through the theory of expected utility value. Theory of reasoned action describing the influence of attitudes to the human behavior and subjective norm, (Momani, Jamous, and Hilles 2017a). From this regard, it is inevitable to focus on human behaviors and attitudes towards addressing the customer's perceived Fin Tech adoption risks and ultimately sharpening their decision making. In extension of the theory of reasoned action, theory of planned behavior extend the knowledge through adding the construct of behavior control, meaning that the process of adopting new technology is primary governed by customers behaviors and the influence of attitude while accompanied by the narrative of behavior control, (Momani, Jamous, and Hilles 2017b). Exemplifying this narrative of acceptance of technology, in a pragmatic example the new introduced technology acceptance or rejection is guided by the intention of making behavior in the occasion the attitude is the main drive and influencer of the respective behavior, (Silva and Dias 2008).

Despite the theoretical ground established through the theory of reasoned action towards considering behavior intention into judging the decision making of adoption of the new technology, the explicitly re sharpening of the respective decision making might be explication through the theory of expected value of utility. Considering the perceived risks in the process of adoption Fin Tech, Theory of expected value of utility profoundly explicating the forces behind

the decision making in the risk environment, (Kahneman and Tversky 1979), emphasizing that the expected value utility is the significant factor determine the decision making of whether to take or not to take the respective risk.

### **Motivation of the Study**

Despite Financial Technology being accompanied by indispensable technological benefits, some researchers and practitioners pose skeptical view point and some doubts that financial technology (Fin Tech) is not the efficacy remedy solution for confronting the recent financial services industry challenges because of the potential risks accompanied by financial technology in the adoption process. The identified potential risks accompanied by the Financial Technology (Fin Tech) in the adoption process are such as, (Ryu 2018); financial risk, legal risk, security risk, operational risks, and systematic risks.

From the above ground the study profoundly focusing on investigating the necessary theoretical understanding as new strategy and innovation towards responding and mitigating the perceived risk in the process of adoption financial technology as the driver of re sharpening the entire financial industry.

Considering the theory of reasoned action, the argument is; the adoption of the financial technology is primarily depending on the customers behaviors believes which are basically influence customer attitudes towards adopting the fin tech, (Ryu 2018). Financial services innovation based on execution of digital technology is profoundly accompanied by the dramatic destruction in the financial industry, (Tatiana and Elissar 2017). However financial experts proposing that financial technology is the efficacy remedy of confronting financial market all challenges but some do not recommend and have significant doubt on Fin Tech, (Ryu 2018). The fundamental mystery of adopting financial technology is the risks which accompanied by the emerging of the technology, (Ryu 2018). Among of fundamental risks accompanied by the Fin Tech introduction is the loss of extra income, new adoption regulation, and vulnerability of security technologies, (Ryu 2018).

### **Research Questions & Methodology**

#### **Research Questions**

The contemporary study is profoundly focusing on answering and addressing the following research questions;

What are the potential risks in Financial Technology (Fin Tech) adoption process?

What is the risk mitigation suitable model for responding the identified risks?

What is the theoretical perspective response to the identified potential risks reflecting the proposed risk mitigation model?

What is the theoretical decision making mechanism and implications on the perceived risks?

## Methodology

Methodologically the study employed theoretical approach to accomplish the desired goals of the study in the context that three theories (Theory of Choice, Theory of Reasoned Action, and The Expected Utility Value Theory) were identified and developed in explicating the entire notion of the study.

In the process of mitigation of identified potential risks which are accompanied by the emerging of Financial Technology (Fin Tech), and further facilitating the smoothly adoption of the Financial Technology (Fin Tech) considering the technological innovations benefits are more meaningful and indispensable, the contemporary study identified and developed three theories (The Theory Of Choice, The Theory Of Reasoned Action, and The Expected Utility Value Theory) to address the entire notion of the study.

The study rigorously through literature review identified the significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, from that point of view, the theory of Choice develop the theoretical knowledge and understanding proving the profound relationship between the risk and the human behavior. Furthermore, the theory of reasoned action, demonstrated the understanding of human behavior and attitudes responding to the perceived risks in the process of adoption while reflecting the mitigation of risks process as per the proposed new model. Ultimately, the theory of Utility Value drew the decision making mechanism and implications regarding to the perceived risks in the Financial Technology (Fin Tech) adoption process.

## Findings of the Research and Its Practical Implications (Significance of the Study)

The study findings revealed that there is significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, in the occasion theoretical evidence proving the profoundly relationship between risk and human behavior. Towards mitigating the identified potential risks for facilitation the Financial Technology (Fin Tech) adoption process, indispensably the focus must be on governing the human behavior to mitigate the risks and facilitate the Financial Technology adoption process. From that regard, the study proposed the new model for risk response and mitigation for the Fin Tech adoption perceived risks while the mitigation process is well accompanied and supported by the theoretical arguments. Ultimately, the study drawn theoretical decision making mechanism and implications of the perceived risks which profoundly accompanied by the Financial Technology (Fin Tech) adoption process.

Implications of the study in the financial technology (Fin Tech) adoption and financial services industry domain at large are; first, Identification of significant potential risks accompanied by Financial Technology (Fin Tech) adoption process. Second, Theoretical development and proving for the profoundly relationship between risk and human behavior. Third, theoretical knowledge and understanding on human behavior in relation to mitigation to risks towards facilitation of Financial Technology (Fin Tech) adoption process. Fourthly, Theoretical decision making mechanism and implications on the perceive risks in the process of Financial Technology (Fin Tech) adoption.

Most practical and significant implications of the study is delivering the theoretical knowledge of governing the human behavior in risks circumstances while upholding the Financial Technology (Fin Tech) adoption process and financial investments at large. The developed theoretical relationship between risk and human behavior, and further the theoretical understanding on the governing of the human behavior in risk mitigation process and upholding financial technology adoption process, and ultimately the theoretical decision making mechanism on the perceived risks, will indispensably pose the practical guidance of Financial Technology adoption from the accompanied threats of risks and uphold the narrative of financial investments management.

### **Objective of the Study**

The study objective is focusing on delivering theoretical knowledge and understanding through focusing on governing human behavior towards responding and mitigating of the perceived risks in the process of adoption Financial Technology (Fin Tech), and further drawing theoretical decision making mechanism and implications on the perceived risks for facilitation Financial Technology adoption process and financial investments management at large in the financial services industry domain.

### **Chapter Summary**

Apart from the introductory part of the study, the following parts of the study made significant contribution towards accomplishing the objective of the study; (1) Risks Accompanied By Financial Technology (Fin Tech) Adoption Process & Theoretical Relationships Between Risks and Human Behavior [(a) Risks Accompanied By Financial Technology (Fin Tech) Adoption Process; (b) Theoretical Relationship Between Risks and Human Behavior]. (2) Financial Technology (Fin Tech) Risk Mitigation Model & Theoretical Response On Risks Mitigation and Decision Implications [(a) Financial Technology (Fin Tech) Risk Mitigation Model; (b) Theoretical Response on Risk Mitigation and Decision Implications]; (3) Materials & Methods (4) Results (5) Conclusion part of the study (6) Acknowledgement (7) Declaration of interest statement (8) References

## **1. Risks Accompanied By Financial Technology (Fin Tech) Adoption & Theoretical Relationship between Risk and Human Behavior**

### **(a) Risks Accompanied By Financial Technology (Fin Tech) Adoption**

Despite Financial Technology being accompanied by indispensable technological benefits, some researchers and practitioners pose skeptical view point and some doubts that financial technology (Fin Tech) is not the efficacy remedy solution for confronting the recent financial services industry challenges because of the potential risks accompanied by financial technology in the adoption process. The identified potential risks accompanied by the Financial Technology (Fin Tech) in the adoption process are such as, (Ryu 2018); financial risk, legal risk, security risk,

operational risks, and systematic risks. The explicitly meaning of the term risk might be explicated as, (Ryu 2018), the fin tech users' perception on the anticipated risks of Fin Tech adoption. Risk can be defined as the anticipation of loss occurrence due to the precarious cinereous,(Cienfuegos Spikin 2013).

The symposium and emerging of Fin Tech in the financial industry is primarily accompanied by opportunities and threats (risk) for prosperity and future of the financial systems, (Coetzee 2020). Financial risk is the circumstance of growing precarious for occurring financial loss in the process of undertaking financial action, (Ryu 2018). In a most occasion online and mobile users behaviors are primarily determined by the so called perceived financial risks, (Ryu 2018). The emerging of Fin Tech is primarily triggered the financial risk in terms of escalating the financial instability in the financial services transactions, (Kpmg 2019). In the perspective of legal affairs the precarious and lack of complete and clear legal status and regulations guiding the entire process of financial technology is what mainly perceived as legal risk, (Ryu 2018). Many financial business firms are considering financial technology as profoundly accompanied by the legal risks considering the fact that there is no proper legal guidance in execution of the technology, (Kpmg 2019). In the occasion of security risks, the possibilities of loss occurrence due to the action of fraud or hackers in the process of executing financial technology transactions are termed to be security risks, (Ryu 2018). In a pragmatic example, in the process of Fin Tech adoption, security risk has been considered as a major potential set back particularly the matter of cyber risk, (Lukonga 2018). Exemplifying the matter of Cyber security, the financial market of MENAP and CCA are the pragmatic example, where there is a potential proliferated growing number of cyber-attacks non secured of privacy, (Lukonga 2018). Considering the entire operation and process of fin tech company, employees delivery, system failure might result to a certain potential loss to occur which considered to be operational risks, (Ryu 2018). The perceived operational risks in adopting the Fin Tech is influenced by the customers miss understanding of the entire financial technology mechanism, (Kpmg 2019). The proliferated growing number of technological failures, human errors, and the precarious of fraud events, are termed to be operational risks which profoundly accompanied by the emerging of financial technology in the recent financial services industry, (ASBA 2017). The financial technology triggered the benefit of cutting the middle man transactions costs in undertaking financial transactions however is profoundly accompanied by the systematic risks which pose the threat in the prosperity of financial system if not properly addressed, (Coetzee 2020). In a different perspectives, research of , (Franco et al. 2020), showing the results that Fin Tech do not have a greatly influence in escalating the systemic risks. Considering the proliferated growing number of risks in adopting the financial technology, (Coetzee 2020), emphasizing that, it is inevitable and indispensably considering regulating and channeling into proper directions the identified number of risks including financial risks, economic risks, operational , and regulatory risks. Perceived risk might be explicated as the customers understanding and perception regarding the precarious and risks accompanied on the decision for adopting the Financial technology , (Ryu 2018). In the process of adopting financial technology it has been emphasized that the perceived risks is among main key factors determining the decision making whether to adopt or not adopt the Fin Tech, (Hu et al. 2019). In skeptical point of view, the perceived risk in adoption of the fin

tech are regarded as not have influence to customers in decision making towards adopting or not adopting the Fin Tech, (Hu et al. 2019). Exemplifying the pragmatic example of decision in adoption of Fin Tech in the growing number of risk evidences, (Coetzee 2020), explicating that South African banks decision in adopting Fin Tech was primarily based on mind set decision of the perceived Fin Tech Risks. In a different observation, (Meyliana, Fernando, and Surjandy 2019), conducted the research in Indonesia regarding the perceived risks in adoption of the Fin Tech, the results of the research revealed that the perceived risks were not having any impact on the adoption of the Fin Tech in Indonesia.

### **(b) Theoretical Relationship Between Risk and Personal Behavior**

The symposium and adoption process of the Financial Technology (Fin Tech) has profoundly accompanied by the different dimensions of potential risks. From this regard, it has become inevitable to confront and mitigate the identified potential risks due to the fact that the adoption of Financial Technology demonstrated the unprecedented financial technology benefits in the financial services industry domain such as elimination of the intermediary (middle men) costs in the process of undertaking the financial transactions. Towards the mitigation process of the potential risks accompanied by the Financial Technology (Fin Tech) adoption, it is indispensable to understand and establish the key factors supporting and facilitating the adoption process of the Financial Technology (Fin Tech), factors relationships, influence and impact to the entire process of adopting the Financial Technology (Fin Tech). From these perspectives, the study has revealed the profound relationships of the perceived Fin Tech adoption risks and the human behavior and attitude, which ultimately will contributing in observing the financial technology adopting process through rigorously interpreting and guiding the human behaviors.

The Theory of choice explicitly explicating the profound relationship between the narrative of risk perception and the human behavior intention towards the application of human behavior intention management to facilitate the entire process of financial technology (Fin tech) adoption. The theory of choice is describing the environment of decision making in the context uncertainties or perceived risks while the human behavior is the key determinant for making the choices options in the context of risk aversion or taking, (Guiso and Paiella 2004). In explicating the profound relationship between the risk and the human behavior, the choice theory has employed the following constructs; risk aversion, choices, human behavior and attitudes, and decision making context. The selected theoretical constructs pose the understanding of relationship between the risk and the human behavior. In exemplifying the narrative of relationships between the risk and human behavior (See the below table – Theoretical constructs & Explanations), in a pragmatic example in the occasion of risk occurrence which need the human decision making, the main factor is the perceived risk in the context that human attitude influence the behavior intention in making decision particularly decision making on whether to implement risk aversion or risk taking in confrontation of the matter.

The study developed and applied the choice theory in explicating the relationship between the risk and the human behavior, however, Tremendous theoretical evidence supports the narrative of profound relationship between the risk and the human being as highlighted as follows; The

theory of choice in precarious conditions poses the indispensable profoundly linkage between human behavior attitudes, the perceived risk, and the context of undertaking decision. The theory explicitly explore that human behavior and attitudes against the respective perceived risk is the fundamental determinant of decision making in the uncertainty and risk environment, (Guiso and Paiella 2004). The theory of choice explicating that the differences of human behavior attitudes towards risk aversion on a particular course of action determine the entire content of decision making to be undertaken, (Guiso and Paiella 2004). Research conducted by, (Guiso and Paiella 2004), focused on investigating household consumers attitudes and behaviors regarding buying the risky asset, theoretical results of the research revealed that, the profoundly relationship between the risk and personal behavior and attitudes plays the significant role of the kind of decision to be implemented by the consumers. In a different theoretical perspective, decision theory explicating the narrative of personal behavior in the occasion of confronting non-strategic precarious (uncertainty), meaning that the uncertainty environment is triggered by the nature circumstances such as illness, (Bernoulli 2005). In a narrow approach, decision theory as well highlight the constructs of choices and decision as primarily related with risk and human behavior, (Bernoulli 2005). In highlighting the theoretical constructs building the profound linkage of human behavior and the respective risk, the prospect theory explicitly pose that commitment, the theory is describing the narrative of the risks occasions in relations to the human behavior, (Stracca 2002). Towards explication the origin of risk aversion, (Zhang, Brennan, and Lo 2014), solidify the profound relationship between the risk and human behavior through emphasizing that, the narrative of risk aversion is among of the indispensable paradigm of the human behavior.

**Key Constructs of the Theory of Choice Developing the Relationships of Risk and Human Behavior**

<b>Theory Constructs</b>	<b>Explanations</b>
Risk Aversion	Is the human course of action undertaken to avoid the perceived risk or uncertainties
Choices	Different preferences might be engaged and opted by the risk taker towards the context of decision making
Human Behavior and Attitudes	Human attitude is the point of view of an individual while human behavior is the outcome result revealed from the attitude influence

Decision Making Context	The point of final action undertaken and implemented from the perceived risk by the human concern

**Source: (Guiso and Paiella 2004)**

Considering the theoretical profound relationship between the risk and the human behavior, to address the smoothly Financial Technology (Fin Tech) adoption process, it is imperative to focus on human behavior intention and attitudes while reflecting and responding to the risk mitigation process stages. From this regard, the theories which will explicate the human behavior intention and attitudes in the process of adoption a new technology is inevitable and indispensable to be employed, and ultimately the theory which will guide the decision making on the financial technology (Fin Tech) adoption mechanism. From this point of view, the study proposed the risk mitigation model, accompanied by the theoretical evidences supporting the Fin Tech perceived risks mitigation process.

## **2. Fin Tech Adoption Risk Mitigation Model Accompanied By Theoretical Response and Decision Making Implications**

The Fin Tech symposium and discourse has become inevitable and vital in the financial services domain due to the recent exponential advanced of financial technology. The symposium and emerging of Fin Tech has profoundly accompanied by benefits and risk to the financial services domain. The proliferated growing number of risks accompanied by the Fin Tech is the fundamental reason for some researcher and practitioners pose the doubt and have skeptical view point that Fin Tech is not the future efficacy solution for the financial services industry domain.

Considering the proliferated escalated precarious number of Fin Tech adoption risks, in the occasion financial services industry domain inevitably demand the possible efficacy remedy for addressing the present financial markets challenges such as the presence of un necessary middle man costs, the contemporary study indispensably propose the perceived risks mitigation model accompanied by theoretical evidence support for explicating the two key narrative; first, delivering the theoretical perspective and knowledge on the perceived Fin Tech adoption risks in the process and stages of risk mitigation model, secondly, theoretical implications and decision making focusing the perceived risks in the Fin Tech adoption notion.

Towards contributing the theoretical innovation perspective for fin tech risk mitigation paradigm change, the proposed risk mitigation model comprises of five level, which are; personal risk perception, risk identification, risk assessment, risk strategies, and risk evaluation. The theoretical response and implications were explicated through the two theories, which are, The Theory of Reasoned Action (TRA) and Expected Utility Value Theory. The study profoundly applied theory of reasoned action in responding the risk mitigation model stages, from level 1 up

to level 4, where theoretical understanding were explicitly elicited to accompany the mitigation stages process. Ultimately, the theoretical implications and decision making on the perceive risks, at the final level of mitigation (Level 5) were explicated through the theory of Expected Utility Value.

**(a) Financial Technology (Fin Tech) Risk Mitigation Proposed Model**

Level – 1	Level - 2	Level - 3	Level - 4	Level - 5
Personal Risk Perception	Risk Identification	Risk Assessment	Risk Strategies	Risk Evaluation
			<ol style="list-style-type: none"> <li>1. Avoid</li> <li>2. Transfer</li> <li>3. Retain</li> <li>4. Reduce</li> </ol>	Decision Making

**Source; Self Innovation Towards Risk Mitigation Process**

**(b) Theoretical Response on Risks Mitigation and Decision Implications**

**(b-1) Theory of Reasoned Action Response on Risk Mitigation Process**

Considering the identified potential risks accompanied by the Financial Technology (Fin Tech) adoption process, and further the developed theoretical profoundly relationship between the risks and the human behavior, the next move, Theory of reasoned action pose the understanding of human behavior and attitudes in mitigating and responding to the perceived Fin Tech adoption risks while focusing to smoothly facilitation of the Financial Technology adoption process. From this part, the final part will focus on explicating the narrative of decision making mechanism and implication on the perceived Fin Tech adoption risks, that final part will further explicated by the theory of Expected Utility Value.

Theory of reasoned action explicitly explicating the theoretical understanding on the perceived Fin Tech adoption risks responding to the mitigation process from the level 1 up to the level 4 of the Fin Tech risk mitigation process. From that regard, the study profoundly explicating the connection and the theoretical understanding between the perceived Fin Tech adoption risks and

the main theoretical constructs such as behavior intention, attitude influence, and subjective norm as reflected and addressing the Fin Tech adoption risks.

The Theory Of Reasoned Action (TRA) founded and developed by Ajzen and Fishbein in 1967, the theory primarily explicating the narrative of behavior intention in the occasion profoundly influenced by the two main constructs, which are, attitudes and the subjective norm, (Momani, Jamous, and Hilles 2017b). Towards explicating the theoretical perspective, connection, and addressing the Fin Tech adoption risks mitigation levels and process, the study employed eight (8) constructs of the theory of reasoned action, which are; Attitude Towards Behavior, Beliefs, Evaluation, Control Beliefs, Voluntariness, Long Term Consequences, Affect Towards Use, Facilitating Conditions. The proposed and identified theory of reasoned action constructs are profoundly addressing the perceived Fin Tech adoption risks and pose the indispensable theoretical understanding on the risk mitigating stages and process for the prosperity and radical of financial technology in the financial services industry domain.

Theory of reasoned action primarily focusing on observing human behavior through rigorously and vigilantly focusing on attitude impact, (Momani, Jamous, and Hilles 2017a). The theory profoundly explicating human behavior suggesting that attitude poses the direct or indirect impact on the individual behavior, (Momani, Jamous, and Hilles 2017a). The theory of reasoned action is mainly constructed by two norms, which are; attitude towards individual behaviors and subjective norms, (Momani, Jamous, and Hilles 2017a). Theory of planned behavior is focusing on explicating three main constructs, which are, attitude towards individual behavior, subjective norm, and behavior controls, (Momani, Jamous, and Hilles 2017a). Theory of reasoned action pose the ground of adoption new technology through considering the three key factors , which are, the behavior intention of the respective person, which primarily influenced by the two factors, which are, attitudes and the subjective norm, (Sharma and Mishra 2014). Considering the theory of reasoned action, the argument is; the adoption of the financial technology is primarily depending on the customers behaviors believes which are basically influence customer attitudes towards adopting the fin tech, (Ryu 2018). Customers attitude towards the adoption of the Fin Tech is the main determinant of the adoption decision while the customer attitude is profoundly influenced by the customer behavior beliefs on the respective service, (Ryu 2018). From this regard, it is imperative to focus on understanding theoretical response on customer's behaviors beliefs and attitudes towards mitigating adoption risks and re shaping the understand on the matter. Exemplifying the pragmatic example of Fin Tech adoption key determinants, the research conducted through Hefei Science and Technology Rural Commercial Bank, and the results revealing that, Fin Tech user trusts has a significant influence on the customers behavior attitudes towards adopting the financial technology, (Hu et al. 2019).

The following model highlights the eight (8) constructs of the theory of reasoned action which profoundly explicating the behavior intention narrative towards addressing the perceived adoption Fin Tech risk in the financial services industry domain

**Identified Eight Constructs of Theory of Reasoned Action Related and reflecting the risk mitigation levels and process**

<b>Constructs</b>	<b>Explanations</b>
Attitude Towards Behavior	“An individual’s positive or negative feelings (evaluative affect) about performing the target behavior”
Beliefs	“The individual’s subjective probability that performing the target behavior will result the consequence”
Evaluation	“An implicit evaluative response” to the consequence”
Control Beliefs	“Control beliefs have to do with the perceived presence of factors that may facilitate or impede performance of a behavior”
Voluntariness	“The extent to which potential adopters perceive the adoption decision to be non-mandatory”
Long Term Consequence	“Outcomes that have a pay-off in the future”
Affect Towards Use	“Feelings of joy, elation, or pleasure, or depression, disgust, displeasure, or hate associated by an individual with a particular act”
Facilitating Conditions	“Objective factors in the environment that observers agree to make an act easy to accomplish. For example, returning items purchased online is facilitated when no fee is charged to return the item. In an information system context, “Provision of support for users of PCs may be one type of facilitating condition that can influence system utilization”

**Source , (Momani, Jamous, and Hilles 2017a)**

The Fin Tech Adoption risks mitigation process will be explicated and addressed through the theory of reasoned action and the theory of Expected value of utility. The theoretical innovation perspective and connection to the perceived risks from level 1 up to the level 4 will be explicated through the theory of reasoned action (TRA), while the theory of Expected Utility Value will

explicate the final level of Fin Tech Risk mitigation process (Level 5) primarily focusing on decision making and implications on the Fin Tech adoption perceived risks.

Considering the level one of the risk mitigation process (Personal risk perception), the notion of personal risk perception is primarily focusing on human behavior view point towards the respective Fin Tech identified risk. From that regard, the theory of reasoned action through the construct of “attitude towards behavior” pose the indispensable understanding and connection between the perceived risks, human behavior, and sharpening the mitigation response. Attitude towards behavior construct primarily focusing on explicating the narrative of attitude influence on the behavior intention towards performing or not performing the particular action. Responding and reflecting the mitigation process, the argument is the fin tech user attitude is the core driver on influencing the behavior intention of the Fin Tech user whether to adopt/use the Fin Tech product. Exemplifying the notion of customer behavior and the influence of attitude in the adoption of the fin tech, the literature of, (Ryu 2018), arguing that, Customers attitude towards the adoption of the Fin Tech is the main determinant of the adoption decision while the customer attitude is profoundly influenced by the customer behavior beliefs on the respective service.

Explicating the second level of risk mitigation process (Risk Identification), the notion of identifying the risk by the Fin Tech users might be profoundly guided by the beliefs. From the perspective that identification of risk might be profoundly guided by the beliefs, theory of reasoned action explicitly narrating the narrative of human beliefs as one of the theory constructs. Theoretical point of view, Beliefs explicating personal understanding that undertaking a particular behavior might produce a particular consequence. Theoretical support on responding the mitigation process particularly in the identification of risk level, to engage the Fin Tech users in smoothly adoption of the fin tech services, it is inevitable and indispensably to focus on sharpening and directing their beliefs into a proper way with positive impact on Fin Tech adoption decision making. In a pragmatic example, (Sharma and Mishra 2014), exemplifying the narrative of belief through the theory of reasoned action as the significant factor in technology adoption notion, explicating that, Theory of reasoned action pose the ground of adoption new technology through considering the three key factors , which are, the behavior intention of the respective person, which primarily influenced by the two factors, which are, attitudes and the beliefs.

The third level of risk Fin Tech adoption risk mitigation termed as Risk assessment is primarily focusing on analyzing the respective perceive risk as the process of decision making on whether to adopt or not. The notion of risk assessment is well reflected in the theory of reasoned action through the narrative construct of “Long term consequence”. Long term consequence in the theory of reasoned action explicitly explicating the course of action which will trigger future beneficial outcomes after implementation. The meaning is the adoption of the perceive fin tech risks are primarily determined by the human behavior and point of view that in future the course of action will yield the fruitfully results. From this ground, the theoretical argument pose the inevitable innovation of considering re sharpening human behaviors and attitudes respective and focusing on long term consequence against the notion of adopting the fin tech perceived risks.

Exemplifying the notion of long term consequence, (Momani, Jamous, and Hilles 2017a), implicitly explication the notion however without eliciting the linkage to Fin Tech, explicating that, the adoption of the new technology is profoundly determined by the technology users long term consequences of the adoption of the respective technology.

The coverage of the theory of reasoned action (TRA) in responding the Fin Tech risk mitigation process come to an end on the fourth level named risk strategies. Risk strategy level is focusing on mitigating the risks through pointing out the classification of course of actions to be undertaken reflection the perceived risks, these course of actions are such as avoid the risk, transfer the risk, retain the risk, or reduce the risk. Undertaking these identified course of actions (avoid the risk, transfer the risk, retain the risk, or reduce the risk) are basically influenced by the human behavior intention, attitude, and evaluation of the perceived risks. All these factors which influence the course of action in the mitigation of the risk process (human behavior intention, attitude, and evaluation) are among of the key constructs of the theory of reasoned action. Theory of reasoned action through the construct of “Evaluation” poses the indispensable knowledge on addressing and responding on the risk mitigation level four (Risk strategies). The theory emphasizing that, evaluation process is the human behavior of reflecting the both sides of taking the particular course of action and their future outcomes, meaning that towards introducing the Fin Tech services for adoption to the customers it is inevitable to prepare and Sharpe the brain of customers in evaluation positive outcome perspectives. In a pragmatic example, the literature of, (Momani, Jamous, and Hilles 2017b), explicating the notion of evaluation towards the adoption of the new technology, arguing that, technology users in many occasions depend on the implicitly evaluation of the respective technology before the decision of acceptance or rejection.

### **(b-2)Expected Utility Value Theory Focusing on Decision Making & Implications**

The final level (5) of Fin Tech adoption risk mitigation process (Risk evaluation and decision making level) is profoundly explicated through the theory of Expected Utility Value Theory, and further the theory pose the way path on decision making mechanism on the perceive Fin Tech Adoption risks and theoretical implications on the notion of Financial technology adoption risks and the entire financial services industry domain.

The Expected Utility Valued Theory is primarily describing the notion of decision making which profoundly determined by the perspective of expected utility value of undertaking the particular course of action, (Lengwiler 2008). The main constructs of the theory are; expected utility value and its influence to the narrative of decision making of a particular action. Expected utility value theory explicitly explicating the narrative of decision making in taking risk emphasizing that the expected utility value after taking the risk is the main motivation and influence of decision making regarding taking or not taking the particular risk,(Mongin 1997). Towards making rationale and wise decision amid the precarious situation, decision theory profoundly explication the commitment, describing the narrative and constructs of sharpening the rationale decision in the occasion of risk and precariousness, (Kahneman and Tversky 1977). Exemplifying the pragmatic example of decision in adoption of Fin Tech in the growing number of risk evidences, (Coetzee

2020), explicating that South African banks decision in adopting Fin Tech was primarily based on mind set decision of the perceived Fin Tech Risks.

**The main constructs of the Expected Utility Value Theory Which Guiding Decision Making on Fin Tech Adoption Risks and Its Implications**

<b>Construct</b>	<b>Explanation</b>
Expected Utility Value	Identified Value or Gain In Evaluation Process of taking or not taking the particular risk
Decision Making	The final outcome result of taking a risk or not taking a risk after considering the dramatic evaluation of its Expected Utility Value

**Source: (Mongin 1997)**

In this final stage of Fin Tech risk mitigation process which focusing on decision making and eliciting the significant implications on the study through the Expected value utility theory, The theory pose the indispensable knowledge on decision making against the perceived Fin Tech Adoption risks. The Expected utility value explicitly narrating that, the foundation of decision making on the Fin Tech Adoption risks is primarily determined by the Fin Tech user’s evaluation on the factor of expected utility valued of the respective fin tech adoption risk or services. Meaning that, it is inevitable for financial services industry domain policy makers make innovation and change the paradigm of fin tech services to become more worth and having greater expected utility value compared to the perceived risks in the eyes and behavior reflection of fin tech users. Fin Tech users must be given the environment of fin tech services which explication that the adoption of fin tech expected utility value is greater and worth that the perceived risks, ultimately will smoothly escalate and enhance the chances of risk mitigation and adoption of the fin tech in the financial services industry domain. Exemplifying the narrative of decision making in considering the expected utility value for the fin tech, the theory of expected utility value have been significantly considered in the literature of, (Coetzee 2020), in the process of adopting the financial technology in the South Africa banks the decision were made considering three key factors, which are, mindset of the policy makers, guiding decision making while considering the future expected utility value after undertaking the fin tech in South Africa.

The indispensable implications of the two explicated theories (Theory of reasoned action and The Expected utility value) on the Fin Tech adoption risks discourse and financial services industry domain is; first, delivering the theoretical innovation knowledge focusing on possible theoretical constructs to consider while responding on the Fin Tech risk mitigation process. Second, explicating the theoretical mechanism for smoothing decision making for Fin Tech users towards adoption of the technology notion. Third, eliciting the theoretical Fin Tech risk mitigation which will focus on changing the paradigm of financial risks mitigation and ultimately to extend the significant debate of Fin Tech and financial risks mitigation.

### **3. Materials and Methodology**

Methodologically the study employed theoretical approach to accomplish the desired goals of the study in the context that three theories (Theory of Choice, Theory of Reasoned Action, and The Expected Utility Value Theory) were identified and developed in explicating the entire notion of the study.

In the process of mitigation of identified potential risks which are accompanied by the emerging of Financial Technology (Fin Tech), and further facilitating the smoothly adoption of the Financial Technology (Fin Tech) considering the technological innovations benefits are more meaningful and indispensable, the contemporary study identified and developed three theories (The Theory Of Choice, The Theory Of Reasoned Action, and The Expected Utility Value Theory) to address the entire notion of the study.

The study rigorously through literature review identified the significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, from that point of view, the theory of Choice develop the theoretical knowledge and understanding proving the profound relationship between the risk and the human behavior. Furthermore, the theory of reasoned action, demonstrated the understanding of human behavior and attitudes responding to the perceived risks in the process of adoption while reflecting the mitigation of risks process as per the proposed new model. Ultimately, the theory of Utility Value drew the decision making mechanism and implications regarding to the perceived risks in the Financial Technology (Fin Tech) adoption process.

### **4. Results**

The study findings revealed that there is significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, in the occasion theoretical evidence proving the profoundly relationship between risk and human behavior. Towards mitigating the identified potential risks for facilitation the Financial Technology (Fin Tech) adoption process, indispensably the focus must be on governing the human behavior to mitigate the risks and facilitate the Financial Technology adoption process. From that regard, the study proposed the new model for risk response and mitigation for the Fin Tech adoption perceived risks while the mitigation process is well accompanied and supported by the theoretical arguments. Ultimately, the study drawn theoretical decision making mechanism and implications of the perceived risks which profoundly accompanied by the Financial Technology (Fin Tech) adoption process.

Implications of the study in the financial technology (Fin Tech) adoption and financial services industry domain at large are; first, Identification of significant potential risks accompanied by Financial Technology (Fin Tech) adoption process. Second, Theoretical development and proving for the profoundly relationship between risk and human behavior. Third, theoretical knowledge and understanding on human behavior in relation to mitigation to risks towards facilitation of Financial Technology (Fin Tech) adoption process. Fourthly, Theoretical decision making mechanism and implications on the perceive risks in the process of Financial Technology (Fin Tech) adoption.

Most practical and significant implications of the study is delivering the theoretical knowledge of governing the human behavior in risks circumstances while upholding the Financial Technology (Fin Tech) adoption process and financial investments at large. The developed theoretical relationship between risk and human behavior, and further the theoretical understanding on the governing of the human behavior in risk mitigation process and upholding financial technology adoption process, and ultimately the theoretical decision making mechanism on the perceived risks, will indispensably pose the practical guidance of Financial Technology adoption from the accompanied threats of risks and uphold the narrative of financial investments management.

## **5. Conclusion**

The Financial Technology (Fin Tech) symposium and emerging has become the inevitable and indispensable in the financial services industry domain considering it has accompanied by perennial benefits such as elimination of the intermediary (middle man) costs in undertaking the financial services transactions. However some researchers and practitioners pose skeptical view point and some doubts that financial technology (Fin Tech) is not the efficacy remedy solution for confronting the recent financial services industry challenges because of the potential risks accompanied by financial technology in the adoption process.

In the process of mitigation of identified potential risks which are accompanied by the emerging of Financial Technology (Fin Tech), and further facilitating the smoothly adoption of the Financial Technology (Fin Tech) considering the technological innovations benefits are more meaningful and indispensable, the contemporary study identified and developed three theories (The Theory Of Choice, The Theory Of Reasoned Action, and The Expected Utility Value Theory) to address the entire notion of the study. The Theory of Choice developed the study ground through proving the profoundly relationship between the risk and the human behavior. Thereafter, The Theory Of Reasoned Action deliver the theoretical knowledge and understanding for the narrative of human behavior intention and attitudes against the perceived Fin Tech Adoption risks towards facilitating the smoothly adoption of the new technology (Fin Tech). Ultimately, The Expected Utility Value Theory concludes the decision making mechanism and implication to the study from the perceived Fin Tech adoption risks.

The study findings revealed that there is significant potential risks accompanied by the Financial Technology (Fin Tech) adoption process, in the occasion theoretical evidence proving the profoundly relationship between risk and human behavior. Towards mitigating the identified potential risks for facilitation the Financial Technology (Fin Tech) adoption process, indispensably the focus must be on governing the human behavior to mitigate the risks and facilitate the Financial Technology adoption process. From that regard, the study proposed the new model for risk response and mitigation for the Fin Tech adoption perceived risks while the mitigation process is well accompanied and supported by the theoretical arguments. Ultimately, the study drawn theoretical decision making mechanism and implications of the perceived risks which profoundly accompanied by the Financial Technology (Fin Tech) adoption process.

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Most practical and significant implications of the study is delivering the theoretical knowledge of governing the human behavior in risks circumstances while upholding the Financial Technology (Fin Tech) adoption process and financial investments at large. The developed theoretical relationship between risk and human behavior, and further the theoretical understanding on the governing of the human behavior in risk mitigation process and upholding financial technology adoption process, and ultimately the theoretical decision making mechanism on the perceived risks, will indispensably pose the practical guidance of Financial Technology adoption from the accompanied threats of risks and uphold the narrative of financial investments management.

### **Recommendation for the further studies**

Regarding the demonstrated study theoretical knowledge and understanding regarding the mitigation of the perceived risks in the process of adoption financial technology, the study indispensably recommending; Application of theories in confronting and addressing the pragmatic case study of perceived Financial Technology risks for efficacy financial investments management.

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Non

### **7. Declaration of Interest**

Non (No Declaration of Interest in this research work)

### **8. Reference**

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