

# A Conceptual Framework of Fintech Laws and Regulations on the Risk Management of Financial Institutions in UAE

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## Abstract

Fintech's drivers and impediments, service providers can better customize their product to the market, this turns the academic outcomes into marketing application and business strategy. The current research concerns mainly Fintech's strategy and supply-side banking risk. Also there is dominant clients of the banks, unlike the thousands who make up the majority of Fintech companies' users on the demand side. The main aim of this paper to develop a conceptual framework of Fintech laws and regulations on the risk management of financial institutions in UAE. Through this study, the society and the academy can be given several benefits and significances: First, this study can provide scientific value to the upcoming Fintech researchers. Fintech is a cutting-edge subject, which is rarely associated with academic literature. The Fintech application is extensive, and the projection of revenue growth is huge and exponential. Scientific research is needed to support such growth by providing sound and valid understanding for future development on the Fintech as a whole

**Keywords:** Fintech, bank, Society, clients and UAE.

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## 1. Introduction

FinTech is simply the global term applied to financial technology. Subsequently, following the financial crisis in 2008, there has been a massive inflow of investment into the financial services technology (KPMG, 2017). This enormous investment has been attracted to the opportunities and changes in the financial institution by innovative-driven technology, regulations and customer behavior (Seng, bin Bakri, Al Shami, Hamid, & Zainal, 2020). Since its early emergence, FinTech has received several definitions. According to (Giudici, 2018), FinTech can be described as the latest technology, which strives to automate and advance the use and delivery of financial services to customers. It is a technology platform for technology-based companies to innovate and perform financial services more effectively (Gomber et al., 2018).

The use of financial sector technology is not new: it was introduced in the 1960's by Automated Teller Machine (ATM) (Cluckey, 2013), and already the different technologies in the financial sector were being used in their level of service. The use of this kind of technology usually only covers areas which automate the process of banking, aim to achieve the objective of reducing work, minimizing mistakes and accelerating the trading process (Foley Curley, 1984). Today, this kind of new Fintech has a limited range of significance: the application of technology in human life everywhere and everywhere, creating a complete financial experience and an authentic, seamless relationship with community, offering direct and tailored facilities (Yu, Johnson, Lai, Cricelli, & Fleming, 2017). In the course of the G20 conference held in Wiesbaden (Carney, 2017), Governor of the Bank of England addressed Fintech as a potential game changer for financial institutes.

## 2. Literature Review

### Fintech in UAE

The financial sector in the UAE plays a key role in the government massive effort to shift the economies away from the heavy reliance on energy sector and toward economy driven by diversified private-sector investments. The UAE provides a big pool of different types of financial institutions that help provide the residents of the country with what they need or want. The types of financial institutions that the UAE has are as follows: Banks, investment companies, moneychangers, finance companies, and monetary intermediaries (Bayzid et al., 2020). The three major types of banks in the UAE are the Commercial banks, Islamic banks, investment banks, alongside the central bank.

The UAE has 22 local banks, 7 of them are Islamic banks and 27 foreign banks from around the world. Taking the advantage of the advanced development of digital technology, Fin Tech is viewed as strong contributors to transform its economy into a digital economy. Although FinTech industry in the UAE is still quite nascent, it is steadily growing (Mueller, 2019). Beginning in 2017, policymakers and regulators in the Gulf region began implementing forward-thinking and agile FinTech policies. Since then, a considerable amount of effort has been witnessed to design more diverse, competitive and innovative economies.

Indeed, fostering healthy FinTech ecosystems is seen as a leading pillar of economic diversification across member states of the Gulf Cooperation Council. The UAE is the largest fintech hub for startups in the MENA (Middle East and North Africa), securing 69 per cent of funding so far this year, a new report has found. The UAE, home to the region's most amount of fintech companies (46 per cent), accounted for 47 per cent of all fintech deals in 2019.

The report co-compiled by Abu Dhabi Global Market (ADGM) and Magnitt confirmed a total investment of \$237 m over 181 deals in MENA fintech startups since 2015, of which 51 deals were made in 2019 alone. Regional fintech start-ups have seen a CAGR (compound annual growth rate) of 39 percent since 2012, and a total of 310 active firms in the MENA region are currently present. Start-ups for payments and remittances emerged as the top sub-sector, accounting for 45 percent of fintech deals so far in 2019.

In 2018 Fintech have outstripped core industries such as e-commerce and logistics to win most transactions. The report also found that 83 per cent of UAE residents are receptive to non-financial institutions adopting fintech solutions, and 76 per cent trust at least one technology company more with their money than with their bank. "Financial services digitalisation is taking place at an unprecedented pace," said Richard Teng, CEO of the ADGM Financial Services Regulatory Authority. "From payments, finance, financial advice, stock market and insurance, financial technology (fintech) rollout, the financial services industry has been reimagined contributing to creativity, productivity and greater financial inclusion.

"This report reveals the industry's needs and shows how we can better attract and secure more investment and financing to support the fintech ecosystem." Several investment funds have emerged over the years that play a critical role in the global investment ecosystem FinTech. Since late 2017, six funds have emerged in Bahrain and the UAE based on our conversations and subsequent research, focusing on partnerships with other ventures or direct investment in innovative firms. All in all, those funds raised about \$1.5 billion in capital. Several of these FinTech related funds have only recently begun to shift from focusing on external opportunities to redirecting more of their capital to emerging opportunities within the region.

These funds are in many cases aligned with the strategic initiatives set out in more detail below by officials in Bahrain and the UAE. These initiatives aim to attract world-class talent to the region, further diversify the economies within each country and position the region as a player in the global investment ecosystem for venture investments. Table 1, shows the six funds, their missions and overall focus. Two of the six funds described are venture-led efforts, and four are initiated by government.

**Table 1. A Breakdown of Several FinTech-Related Investment Funds**

Fund Name	Expected Contributions
(Abu Dhabi Catalyst Partners, 2019)	Generate returns and gain positive impact on the Abu Dhabi Global Market ecosystem of investors, investees and service providers.
(A venture-led effort by Abu Dhabi Global Market (ADGM)), 2019)	Targeted opportunities: Asset management, specialty finance, and financial infrastructure Criteria: Impact on job creation and engagement with wider ADGM-based service ecosystem

(Ghadan Ventures Fund, 2019)	To drive the establishment and growth of start-ups in Abu Dhabi by increasing the amount of investment capital available in the market.
(Dubai International Financial Center's Fintech, 2018)	To develop a vibrant Fintech ecosystem serving the needs of our wider region. Accelerating the development of FinTech in the Middle East, Africa, and South Asia (MEASA) region by investing in startup and mature growth firms looking to access these markets
(Al Waha Fund of Funds, 2020)	Investment in venture capital funds that directly invest in companies from the MENA region (Technology, FinTech, or Smart Cities solutions)
(Global Fintech Hub Report, 2018)	Investment in the Fintech opportunities in the US, Europe, Southeast Asia and member states of the GCC
(FinTech Fund, 2017)	Establish, grow, and upscale startup and growth-stage firms with a presence in or looking to access the MEASA market

### The Related Theory

This study also provides research value from a different perspective and fills the research gap: the three most widely used theoretical models that scholars use for discussion and research are: the technology acceptance model (TAM), theory of reasoned action (TRA) and the theory of planned behavior (TPB)

The Technology Acceptance Model (TAM) proposed by Davis, Bagozzi, and Warshaw (1989) originated from the Reasoned Action Theory (TRA). For addressed, TRA offers a conceptual framework for describing general human actions without a particular domain; TAM is mainly meant for use of the information system, recognizing adoption of the technology. TAM was originally developed to explain the causal link between external variables and the acceptance by users of personal computer applications (Davis, Bagozzi, & Warshaw, 1989). When TAM relies on measuring the degree of usefulness to conclude some technology's acceptance level, it can result in an inaccurate result. Meanwhile, both TRA and TAM are highly behavior-based theory which assumes that when anyone has an intention to act, they may do the act without any restrictions, which in the actual situation is impractical. Although TAM is one of the most common uses and widely adopted theory in the study of technological acceptance, there are several limitations (Bagozzi, Davis, & Warshaw, 1992): this model is based on the personal feelings of the end user; this feeling is unnecessary rational, and it does not really need to reflect the real implications of how the new technology can solve a living problem or improve the production.

Limited freedom of action is one of a good example of the TRA and TAM limitations. Perceived, the shift from TRA to TAM focused attention and domain on the technological field from a general explanatory perspective. Alternatively, tolerance of technology should not only be evaluated from a scientific perspective; psychological analysis may be another dimension with perspectives

Theory of Reasoned Action (TRA) by Martin Fishbein and Icek Ajzen (1967), and Social Judgment Theory (SJT) by Muzaffer Sherif (O'keefe 2002). Persuasion is one word within the power umbrella. Persuasion may seek to alter, manipulate, and control one's values, emotions, expectations, desires, and actions (Gass & Seiter, 2010). Reasoned Action Theory is a general model of research, since TRA does not specify the beliefs that are operative for a behavior because of this design. Researchers who use TRA must first identify the beliefs that are prominent for subjects with respect to the behaviour. Fischbein and Ajzen (1975) and Ajzen and Fischbein (1980) suggested using free response, i.e. open-ended interviews with representative members of the subject group, extracting five (5) to nine (9) notable beliefs; understanding possible factors that will affect the subject group and further developing the research model. So, influenced by the initial TRA concept, and the principle designer's suggestion. Additional hypotheses may be tested and include specific beliefs to guide the adoption check.

The Theory of Planned Behaviour (TPB) is an extension of the Theory of Reasoned Action (TRA) (Ajzen and Fischbein, 1980; Fishbein and Ajzen, 1975). TPB highlights the move to highlight the incompleteness on volitional regulation, one of the shortcomings of the original model that addresses the real purpose of habits. Section 2.4 displays the basic diagram of TPB. TPB states that behavioral attitude; subjective standards (SN) and perceived behavioral control

(PBC) develop the behavioral intentions and actual behaviors of an individual together. Many of the experiments also shown that TPB has greater explanatory capacity than utilizing TRA alone (Ajzen, 1989).

Although TPB is not focused only on the technology acceptance instead providing a better consideration into the incompleteness on volitional control in the various domain, Talyor and Todd (1955) developed the decomposed TPB (DTPB), they believed that a better understanding of the relationships between beliefs, attitudes, intention and behavior would better explain individual actions Shimp and Kavas (1984) argued that it was impossible to organize the cognitive components of belief into one single conceptual or cognitive unit. A review of the decomposed theory of planned behavior will be discussed now, based on that reason.

Study certain technology's level of acceptance. TAM, TRA and TPB are two other frameworks for research into technology-related issues are used in dominant models, less and less literature. The reasons behind this occurrence are complex, but the result is clear: more similar issues and more similar research focus it will produce literature which may omit the advantage of some other research models. Above are important arguments and message from 'a critical study of mobile payment research,' in which 'majority research had only been focused on a few subjects' and over-using TAM models to explain the level of acceptable nature of certain technologies,' (Dahlberg, Guo, & Ondrus, A critical review of mobile payment research, 2015). Since the technology itself differs fundamentally from the technological service, this research will use another model to study Fintech's drivers and impediments, the Theoretical Planed Behaviour (TPB) in order to understand the topics from other perspectives.

### 3. Finding

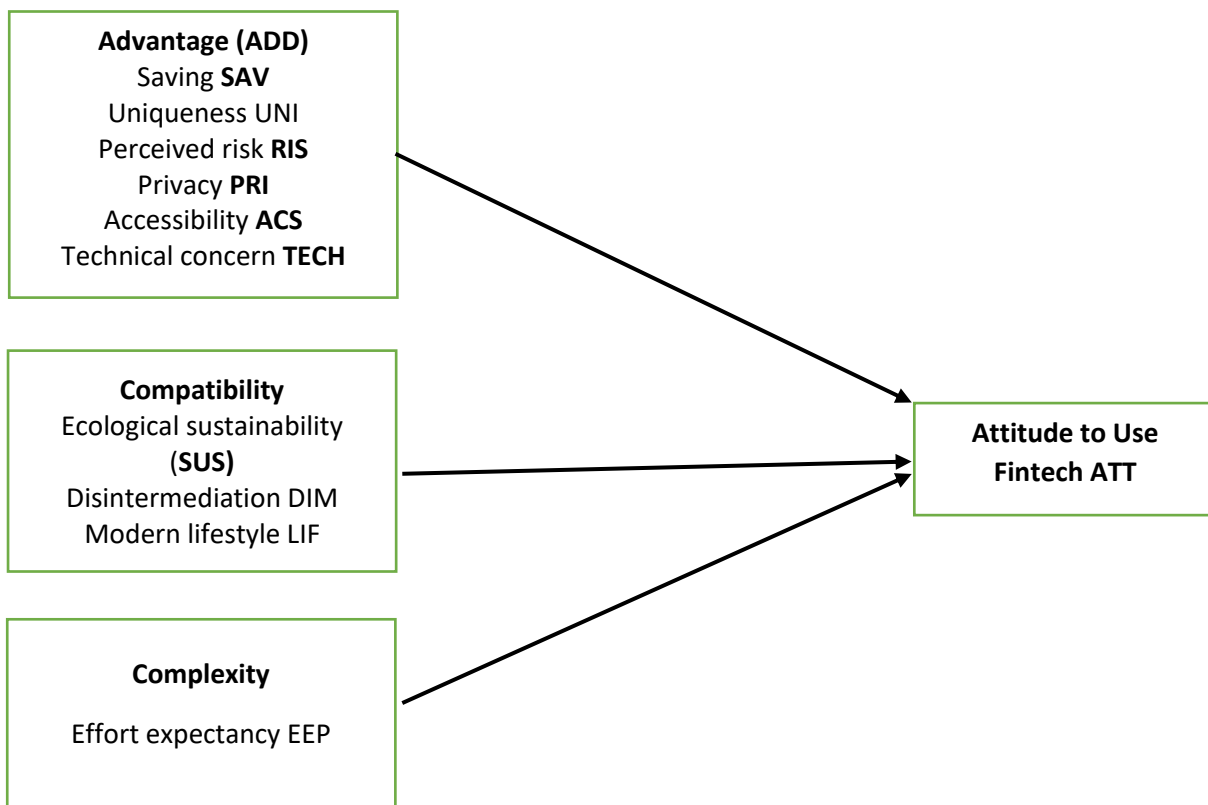
#### Conceptual Model and Hypothesis Development

Motivated from the gap described by the theoretical framework in Section 2.6, this study proposes to overcome the gaps through proposing framework on the Fintech industry as a whole in the Asia sense is quite unusual. Based on the previous studies which discussed the constructs categories including: Advantage (ADD) which include, saving (SAV), Uniqueness (UNI), Perceived risk (RIS), Privacy (PRI), Accessibility (ACS), Technical concern (TECH) while the Compatibility which includes; Ecological sustainability (SUS) Disintermediation (DIM) Modern lifestyle (LIF) and also the last factor in this study Complexity includes; Effort expectancy (EEP) were supported by the previous studies (see Table 2).

**Table 2. Fintech Constructs Used in this Paper**

Construct	Descriptors	Source
Attitude	<ol style="list-style-type: none"> <li>1. I think that using Fin tech is a good idea</li> <li>2. I think that using Fin tech would be a wise idea</li> <li>3. I think that using Fin Tech is a pleasant experience</li> <li>4. In my opinion, it is desirable to use Fin Tech</li> </ol>	(Asnakew, 2020) (Lee, 2009)
Continuous Behavioural Intention	<ol style="list-style-type: none"> <li>1. I would positively consider Fin tech services more often in the future</li> <li>2. I intend to continue using Fin Tech if my banks offer the service</li> <li>3. I would like to continue using Fin Tech services</li> </ol>	(Ryu, 2018); adapted from Cheng et al. (2006) and Lee(2009)
Advantage	<ol style="list-style-type: none"> <li>1. Fintech allows user save more than usual</li> <li>2. Fintech provides financial products and services which user cannot find from elsewhere</li> <li>3. Error, mistakes and malfunction will occur during Fintech process</li> <li>4. Fintech allows user access financial products and services anytime and anywhere</li> <li>5. Fin tech allows user to make profit</li> <li>6. Fintech relies on various kind of technology which it may not be available to the user</li> </ol>	(Arora, Liang, & Ma, 2017); (Yiu, 2017) (Crosman, 2017)

Compatible	<ol style="list-style-type: none"> <li>1. Fintech helps protect the environment</li> <li>2. Fintech reshape the banks and financial institutions by disintermediation</li> <li>3. Fintech is a trend leading to modern lifestyle</li> </ol>	(Tussyadiah, 2016) (Blakstad & Allen, 2018) (Fintechnews Singapore., 2017)
Complexity	<ol style="list-style-type: none"> <li>1. Fintech requires a lot of efforts to be done.</li> <li>2. Fintech is difficult to manage</li> <li>3. Fintech is difficult to operate</li> <li>4. Fintech is difficult to understand</li> </ol>	(Shih & Fang, 2004)(Munoz-Leiva, Climent-Climent, & Liébana-Cabanillas, 2019); (Harrison, 2015)
Perceived Risk	<ol style="list-style-type: none"> <li>1. Using Fintech is associated with a high level of risk</li> <li>2. There is a high level of uncertainty using Fintech</li> <li>3. Overall, I think that there is a little benefit to use Fintech compared to traditional financial services</li> </ol>	(Brignall & Cloutier, 2015) (Accenture, 2017)
Trust	<ol style="list-style-type: none"> <li>1. Fin Tech seems dependable</li> <li>2. Fin Tech seems secure</li> <li>3. Fin Tech was created to help customers</li> </ol>	(Asnakew, 2020);



**Figure 1; Proposed Model on User Motives to Take Part in the Financial Technology (Fintech)**

**4. Conclusion**

Much of the current literature and discussion on Fintech is currently going into the context of America and Europe; this study can contribute to the Fintech domain Asia context. By finding out what the Fintech drivers are; service providers can better design their platform so that end-users can engage their assets further under a secure infrastructure; To improve the performance of wealth management (Scott-Briggs, 2017); by knowing the impediments of Fintech, business providers can improve disadvantages, educate end-users for misunderstanding and marketing for the next evolution of financial technology, moving from card age to mobile.

In brief, Financial Technology (Fintech) has immense potential to address unmet wealth management needs. To those with no previous exposure to financial services, such as disadvantaged residents or those with bad credit records, Fintech provides access to virtually all. Fintech provides alternative wealth management solutions and easier education for potential wealth growth for people with conservative financial views or those suffering from low financial returns, such as people with retirement fund growth beaten by inflation.

Fintech allows for more personalized products, more connected customer services and more convenient operations for people who are already highly engaged in technology. By understanding the drivers and impediments of the adoption of financial technology and the relationship between wealth management and financial technology; stakeholders such as government, financial institutions, technology developers, business planners and citizen end-users can gain insights for regulatory decision-making, product design and investment return optimization.

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