**MFSA FinSights**

# What is FinTech?

The financial sector is continuously evolving through the rapid development and adoption of new technologies. The term 'FinTech' generally refers to financial innovation that seek to provide enhanced financial service offerings through the utilisation of enabling technologies. These generally include Distributed Ledger Technology & Smart Contracts; Artificial Intelligence, Machine Learning & Big Data, Cloud Computing, Web 3.0, Application Programme Interfaces and Micro-Services; Robotic Process Automation and the Internet of Things.

**As part of the MFSA's initiatives to generate awareness, drive culture and deliver a cross-sectoral knowledge platform which can support the MFSA's functions in preparing for the financial services of tomorrow, these insights will delve into enabling technologies, enabling innovations and their sectoral applications.**

## 1 What is FinTech

Following the latest technological developments within the financial services sphere, it is important to understand FinTech and its implications on the wider financial market. Such new era was coined as the *'FinTech Revolution'*. Notwithstanding the 2008 Great Recession and the 2019 global pandemic, not less than USD 1 trillion were raised by entities that provide FinTech products and services. Although FinTech and digital finance became more popular recently, they are not novel phenomena. In fact, a study conducted by Deloitte (2017) posits that interest in FinTech and digital finance spiked since early 2015 to stay abreast with emerging technological advances.

### 1.1 Digital Finance vs FinTech

In order to understand FinTech and its implications, the theory surrounding digital finance is primarily put forward. While a comprehensive definition of digital finance is not available, it generally refers to the digitalisation phenomenon happening within the financial sector and encompasses the utilisation of financial services products, services or processes that are allowed via technology-enabled devices and the internet. Therefore, as depicted in Figure 1, digital finance refers to a broader spectrum of digitalisation when compared to FinTech within the financial sector.

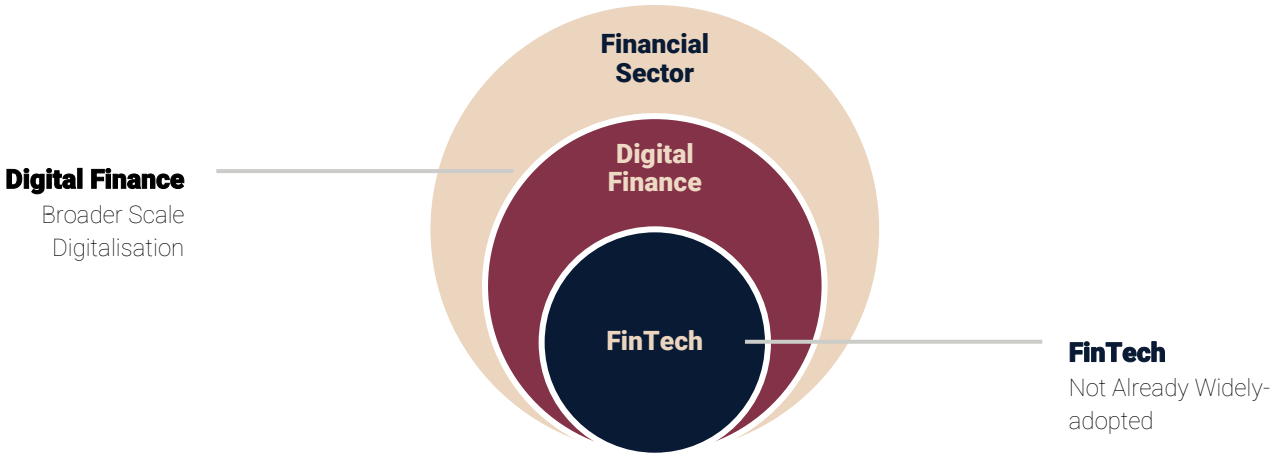


FIGURE 1 | DIGITAL FINANCE AND FINTECH SPECTRUM
Source: Authors' Own Sources

As portrayed in Figure 1, digital finance is more linked to well-established digital processes and products, while FinTech focuses on novel products and business processes that may disrupt and challenge the financial sector and that are not already widely adopted. Thus, every FinTech product is classified under digital finance, but not all digital finance products may qualify as FinTech. This implies that the existence of FinTech has always been in parallel with digital finance.

### 1.2 FinTech

The term *'FinTech'* has significant implications on numerous studies surrounding FinTech globally. However, these studies fail to clearly define the definition of FinTech and its corresponding characteristics. As a phenomenon that happens at a narrow scope, FinTech is considered as a *'horizontal phenomenon'* across the entire financial sector rather than as a separate industry.

The definition of FinTech applied by the MFSA within Rule 3 of the MFSA Act (Chapter 330 of the Laws of Malta) conforms to the latest definition adopted by the European Commission FinTech Action Plan (2018), European Banking Authority (EBA, 2018) and the Financial Stability Board (FSB, 2019). Under Rule 3, FinTech is defined as *"technologically-enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and the provision of financial services"*.

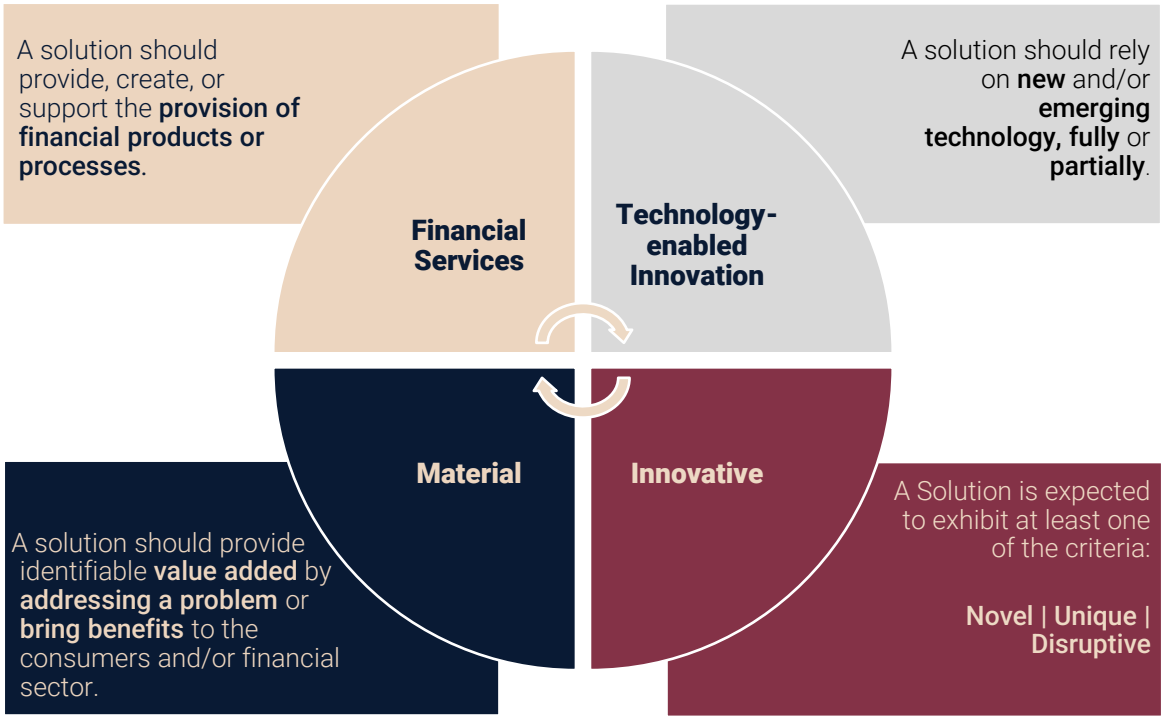


FIGURE 2 | FINTECH CHARACTERISTICS
Source: Authors' Own Sources

Figure 2 pinpoints the main characteristics of FinTech based on literature surrounding the topic. In order to classify as FinTech, a solution should: (i) provide, create, or support the provision of financial products or processes, (ii) rely fully or partially on existing or emerging technology, (iii) be new, unique or disruptive, and (iv) provide identifiable value added by addressing an issue or bring benefits to the consumers or the financial sector.

## 2 Market Conditions

Research on demand and supply side market conditions underpinning FinTech is important since growth in this area is generally spurred by risk-bearing capital. De Haan *et al.* (2012) and Schindler (2017) identified five generic and interconnected drivers of FinTech. The interconnectedness between FinTech drivers stems from the notion that supply-side drivers cannot thrive with non-existing demand. Conversely, the inverse is also true. The demand and supply side FinTech market conditions are underpinned below.

**Demand-side**

**Changing Consumer Preferences** – The influence of demand for FinTech products, services and processes is subject to changes in consumer preferences. Consumers expect a cost-effective, and convenient FinTech product and service.

**Demographics** – The adoption of financial products and services is motivated by demographics. For instance, mobile banking and payments were driven by the increasing use of smartphones from the young generation, which became more available and adaptable.

**Supply-side**

**Evolving Technology** – Innovation within the financial services sphere is enabled with technological development. For instance, technological innovations such as Artificial Intelligence ('AI') and Machine Learning ('ML') allow development of FinTech solutions, amongst others, robo-advising and credit scoring. Therefore, technological advancements promote the offering of FinTech solutions via evolving and changing dynamics of business models.

**Financial Regulation and Market Structure** – The relationship between regulation and financial innovation is complex. Although strict regulation may restrain financial innovation, effective regulation is important for the protection of consumers, ensuring market integrity and financial stability.

**Dynamic Macroeconomic and Financial Landscape** – Changes in macroeconomic and financial landscape motivate the creation of novel FinTech offerings. For instance, the 2008 global financial crisis led to the creation of new products, services and processes that may not have been available before. The availability of innovative technology provides financial institutions with the capacity to provide such offerings.

## 3 Benefits and Risk

The implications of FinTech on the financial service landscape, financial stability, and the wider economic context should be assessed on a case-by-case basis. This especially so in view of the horizontal nature of FinTech, which covers a wide spectrum of areas, each with their own unique characteristics and contexts. That being said, various benefits and risks have been identified in literature.

**BENEFITS**

**Financial Stability** - To date there is no empirical evidence which clearly outlines the relationship between FinTech adoption and financial stability. However, a recent study published by Daud *et al.* (2021) concluded that the application of AI, cloud and data technology promoted financial stability.

**Consumer and Investor Protection** - There are circumstances in which FinTech offerings enhance consumer and investor protection. For instance, consumers have full traceability of transactions happening on a blockchain. Also, AI may be applied for identity verification and fraud detections.

**Safeguarding Market Integrity** – FinTech, particularly through the application of RegTech and SupTech solutions, has also enabled novel ways towards safeguarding market integrity, through the enhancement of several control functions, regulatory reporting, compliance, and supervision.

**Higher Degree of Market Inclusion** – FinTech solutions may provide and facilitate greater access to different financial products and services.

**Increased Competition** – FinTech adoption fosters competition from a wider range of products and services available to consumers, motivated by new entrants within the FinTech space.

**RISKS**

**Magnified Shocks to the financial system** – Generally FinTech offerings are driven by risk-bearing capital. BigTechs or other FinTech entities may spread their losses across the entire sector.

**Market Manipulation** – Herding algorithms that mimic each other may potentially influence the prices of financial assets.

**Cyber and Data Security** – As the systems of financial institutions become increasingly interconnected, a system vulnerability could end up disrupting other financial institutions that might have negative effects on the overall financial system, including data breaches. This also applies to the reliance on cloud technology, where a disruption in their service could be detrimental to cloud-based financial systems.

**Regulatory** – In situations where FinTech products or services are not covered by established legislation as a result of their novel FinTech offering, existing regulatory frameworks would require review.

**Financing and Leverage** – The higher accessibility to financial services products could make debt easier to access, which may lead to over-leveraging and default risks. Also, FinTech drivers might accelerate growth within the financial services area, but may leave entities not enough time to adjust their risk appetite. This could potentially result in FinTech entities over-leveraging their positions.

Although dynamic, the definition of FinTech applied by the MFSA conforms to those adopted by the European Commission (2018), EBA (2018) and FSB (2019). Although four characteristics have been identified to effectively determine whether a particular innovation should be considered as FinTech, due to the extensive use cases and its always nascent nature, these should be assessed on case-by-case basis.

**Supplementary Reads…**


Daud, S. N. M., Khalid, A., & Azman-Saini, W. N. W. (2021). Fintech and financial stability: threat or opportunity?. *Finance Research Letters*, 102667.

De Haan, J., Oosterloo, S., & Schoenmaker, D. (2012). Financial Markets and Institutions. *Cambridge University Press Textbooks*.

Deloitte (2017). *Fintech by the numbers*. Deloitte Turkey. Available online.

European Commission (2018). Communication From The Commission To The European Parliament, The Council, The European Central Bank, The European Economic And Social Committee And The Committee Of The Regions - *FinTech Action plan: For a more competitive and innovative European financial sector*. Available online.

**Supplementary Reads…**

FSB (2019). *FinTech and market structure in financial services: Market developments and potential financial stability implications.*

Schindler, J. W. (2017). FinTech and financial innovation: Drivers and depth.

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Check our other **FinSights** and should you have any queries or wish to discuss your ideas, even within the context of our **MFSA Fintech Regulatory Sandbox**, contact us at **fintech@mfsa.mt**.