

# Fintech: the new disruptive technology in the world of finance

Prof. Dr. Younes Soualhi
Senior Researcher & Head of Islamic
Banking Unit
ISRA

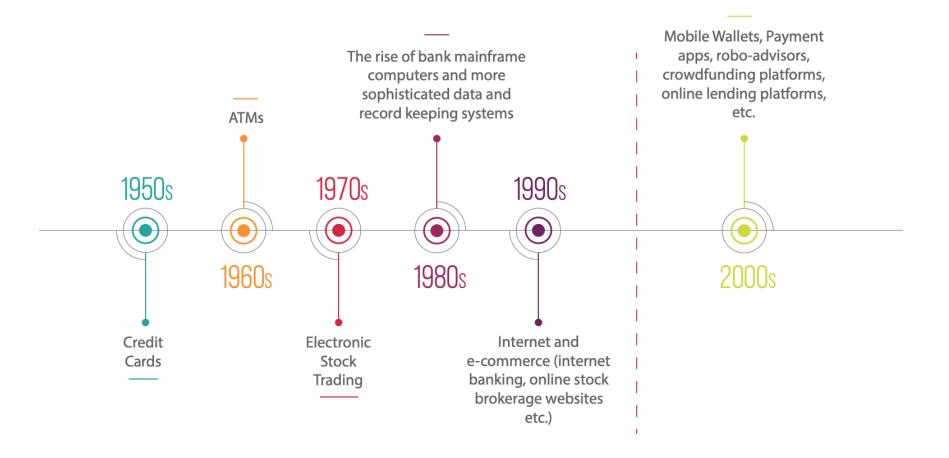
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- Impact of Fintech
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# Historical background of Fintech

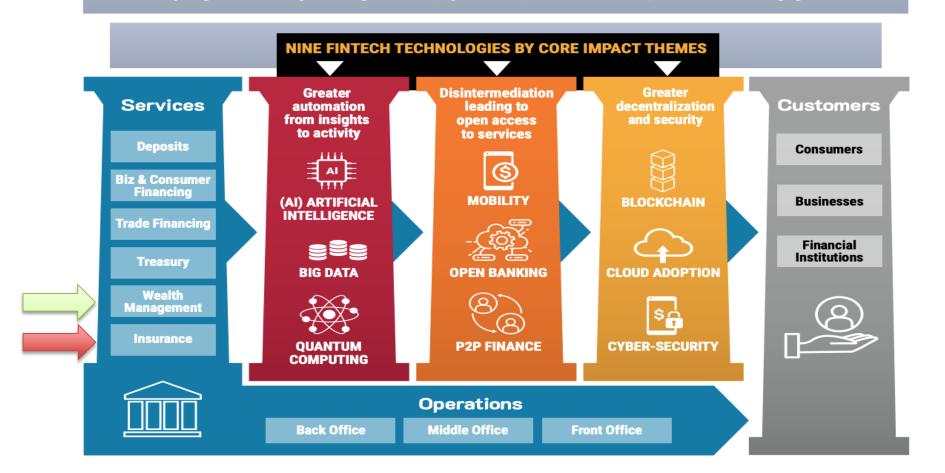


# Impact of fintech

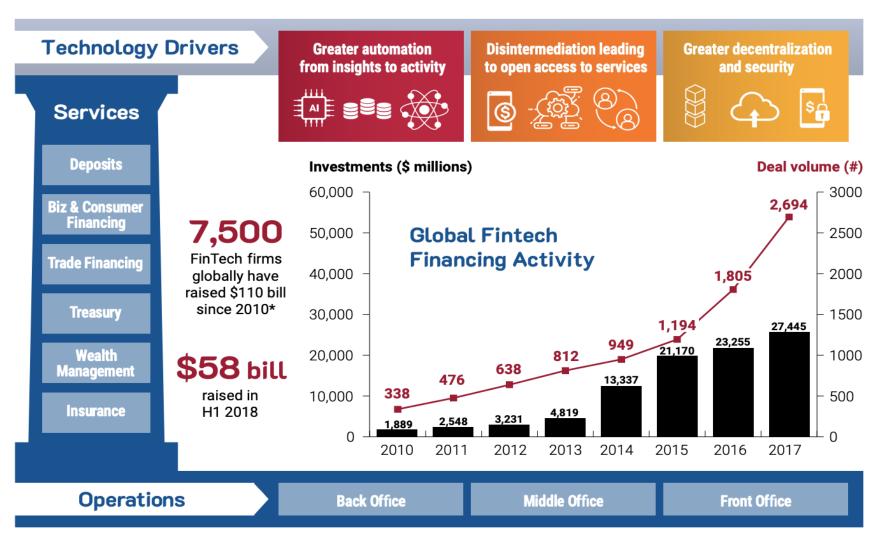
Diagram #1: Global Fintech Framework

#### **Fintech**

4th Industrial Revolution\* driven technologies exponentially enhancing and/or disrupting 20th century banking services, operations, business models, and customer engagement.



#### Global Ecosystem & Momentum



\*Source: Accenture Research analysis of CB Insights data

Key takeaway:

Fintech is disrupting every area of the financial services industry, empowered by investments.

#### GREATER AUTOMATION FROM INSIGHTS TO ACTIVITY



A set of technologies to enable computers to execute "smart" tasks through technologies such as natural language processing, expert systems and machine learning, a process that applies algorithms to analyze data to generate insights and make predictions.

Automates labor-intensive tasks and helps improve customer experiences by generating insights and making predictions.



Uses analytical tools to process large data sets from multiple different sources driving business decisions.

Significantly reduces the time and error from traditional and often manual business intelligence methods.



Applies principles from quantum theory to develop computers with significantly more processing power.

Solves complex problems much more effectively than conventional computers.

#### DISINTERMEDIATION LEADING TO OPEN ACCESS TO SERVICES



A technology-based service that connects businesses directly with investors, through a web-based platform for a fee.

Expands access to financing, in particular for SMEs, and makes verification/credit checking easier for investors



Uses application program interfaces (APIs) that allow third-party service providers to access customer banking data.

Enables customers and businesses to access all their bank data in real-time, allowing more accurate and ip-to-date information on finances.



Describes the ability to access information or applications in an untethered manner, usually through portable, networked computing devices such as smartphones.

Enables user to access information and applications "on the go", without needing to be in a fixed location.

#### **GREATER DECENTRALIZATION AND SECURITY**



Tracks and records data using a distributed digital ledger system - verifying and storing data across hundreds or thousands of computers globally.

Removes the need, and associated cost, of keeping transactions/ contracts in a central repository database, improves accountability and improves security.



A set of technologies, processes and practices used to protect networks, computers, programs and data from attack or unauthorized access.

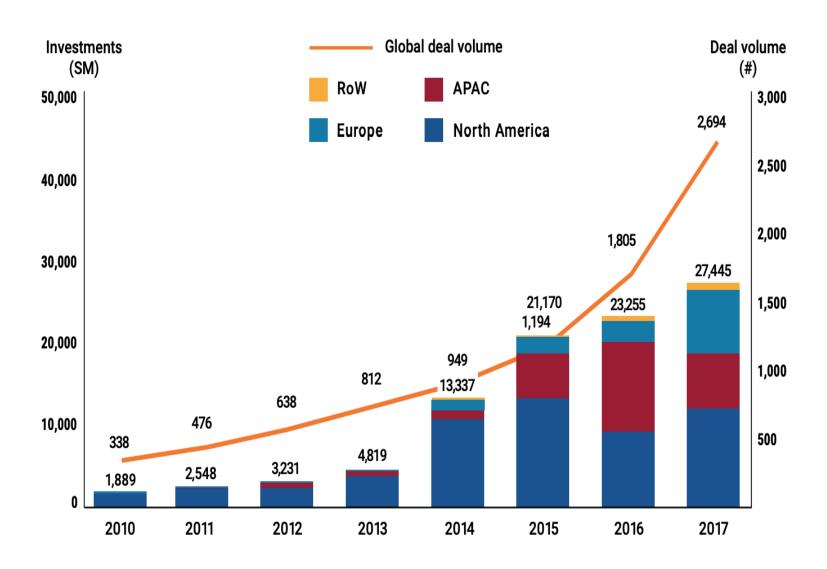
Data breaches are a major issue, impacting 22 global financial institutions, incl. Lloyds and Santander. A global market worth ~\$75 billion in 2015.



Stores resources on the internet (in a "cloud") and retrieves them using web-based tools and applications instead of on a direct server connection.

Cloud adoption significantly reduces banks' capital expenditure on expensive internal servers.

## Global fintech financing activity by region 2010 - 2017



Source: Accenture Research analysis if CB Insights data

### **Facts**

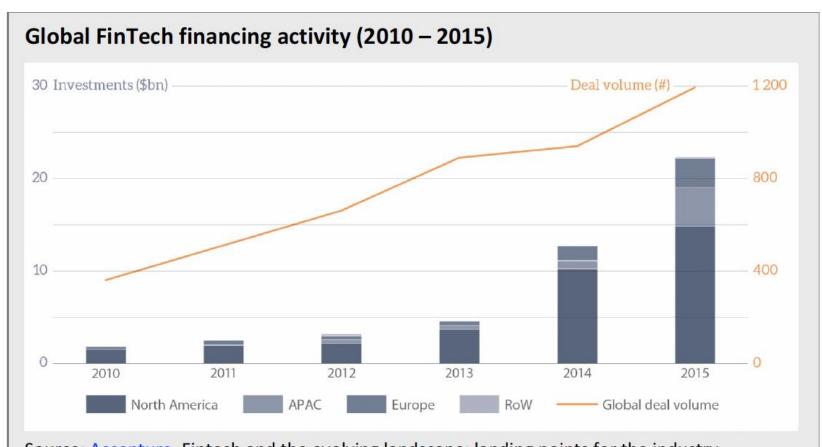
- It is mainly used to refer to firms that use technology-based systems either to provide financial services and products directly, or to try to make the financial system more efficient.
- Examples:
- robotic trading, cashless payments, crowd funding platforms, robot-advice, and, virtual currencies.
- Value: The value of global FinTech investment in 2015 grew by 75 % to US\$22.3 billion.
- Corporates, venture capital and private equity firms have invested more than US\$50 billion in almost 2 500 global FinTech start-ups since 2010.

## Scope of Fintech

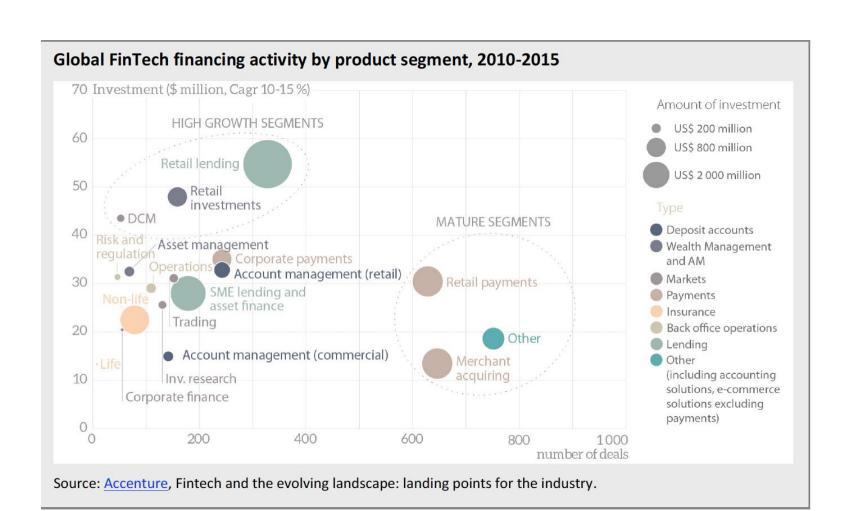
- (1) Finance and investment such as alternative financing mechanisms, particularly crowdfunding and P2P lending, but also robot-advisory services;
- (2) Operations and risk management to build up better compliance systems (i.e. RegTech);
- (3) Payments and infrastructure, such as internet and mobile payment systems, and infrastructure for securities trading and settlement and for over-the-counter (OTC) derivatives trading;
- (4) Data security and monetisation to enhance the efficiency and availability of financial services (through the use of 'big data'), to better exploit the monetary value of data, and to tackle cybercrime and espionage;
- (5) Customer interface such as online and mobile financial services.

## Scope





Source: Accenture, Fintech and the evolving landscape: landing points for the industry.



### Drivers of Fintech

Figure: Overview of key drivers

#### **GOVERMENT INITIATIVES**



\$100 million planned fund by DIFC (Dubai International Financial Center) to invest in Fin-tech start-ups. Bahrain and Malaysia have setup 'regulatory

#### **STARTUPS**



93 Islamic FinTech players globally

sandbox' for Fintech growth



Young demographic: 24 years median age of Muslims worldwide (compared to 32 globally)

15 of top 50 countries w/Smartphone penetration are Islamic economies

72% unbanked population in OIC member countries (core Islamic finance markets) compared to 49% worldwide. (Global Findex)

Government is driving change in the Islamic finance ecosystem

## Global drivers of Fintech

- 1. Governments:
- a. "Regulatory Sandbox" for innovation in Fintech.
- b. Investing in Fintech start-ups.

#### 2. customers:

- a. Young digital generation (70% of world youth are online).
- b. The unbanked (31% of global adult population is unbanked), Fintech is capable of reducing this figure.

#### 3. Fintech startups:

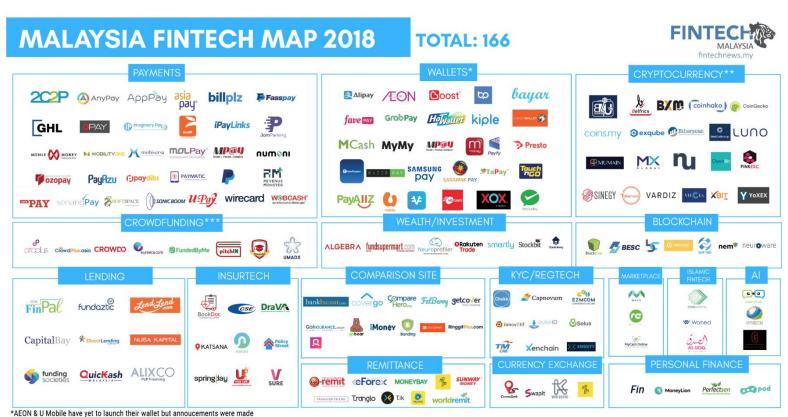
- a. Fintech companies offering non banking services (payment)
- b. More innovative than banks
- c. Lesser regulations than banks
- d. Offering accessible, convenient and tailored services.

# Startups Fintech companies

		Startup example	Conventional provider example (Americas/Europe)	Conventional provider example (Asia-Pacific)		
Artific intellige	cial	Personetics Technologies offers a predictive interaction solution for financial institutions to deliver personalized customer experiences.	JP Morgan's Contract Intelligence (COIN) program applied machine-learning-based artificial intelligence to perform manual contract-related tasks in a fraction of the time it previously took.  Barclays is investing heavily in developing its artificial intelligence capabilities.	Singapore-based <b>DBS Bank</b> is using artificial intelligence to offer mobile-only banking in India, enhancing customer service by offering a truly branchless banking experience.		
Blockc	Blockstream is a bitcoin-focused Finte company that works in cryptocurrencies, open assets, and smacontracts, enabling machine secure payments and transparent, more efficients.		R3, a consortium that includes 42 of the world's largest banks including European banking powerhouses such as Barclays, Deutsche Bank, Commerzbank and Societe Generale, is experimenting with Microsoft's Blockchain-as-a-Service to create a bank-to-bank global transaction system, already developing a smart contract implementation that will lead to more efficient and transparent transactions for end customers.	Singapore-based OCBC Bank has become the first bank in Southeast Asia to apply blockchain in its local and cross- border payment funds transfer services, reducing the time it takes customers to make fund transfers from up to a day to just 5 minutes.		
Cybersed	curity	Verafin provides compliance, anti-money-laundering and fraud detection software, helping to reduce instances of money laundering and fraud in the banking sector.	Societe Generale is taking cybersecurity more seriously: given that 86% of their incoming contacts are from digital accounts, and with 700 million mobile logins annually, there are heightened cybersecurity challenges for them. Customers will benefit from enhanced security through fewer cases of cybercrime.	Maybank is partnering with organizations such as Cybersecurity Malaysia to increase customers' awareness of Internet banking safety by conducting an awareness campaign and promoting safe online banking, helping enhance customer service by reducing the number of customers that fall victim to cyberattacks or online scams.		

		Startup example	Conventional provider example (Americas/Europe)	Conventional provider example (Asia-Pacific)		
	Big data/ Analytics	Wecash is a big data credit assessment platform that provides extensive credit assessments and builds predictive models that help financial institutions better manage customers' credit risk.	Goldman Sachs has substantially developed its big data and artificial intelligence capabilities, resulting in a significant reduction of the size of its US equities trading desk.  Deutsche Bank is making increased use of data analytics in its processes.	Singapore-based OCBC Bank used analytics to better understand their customers' profiles, enhancing OCBC's customer servicing abilities through targeting offerings.		
	Open Banking	Simple is a web- and- mobile application that unifies various accounts into one accessible bank card.	Capital One has launched a developer portal and three new open APIs, increasing the provision of open banking services for customers.  Deutsche Bank have developed "Autobahn", an app market that gives clients access to apps to meet their banking needs, thus improving customer servicing through infrastructure development.	Mizuho Financial Group Partnered with Fintech startup Moneytree to use Moneytree's API technology.		
	Adoption	Mint is a financial planning app that made extensive use of cloud computing to save on costs and scale quickly.	Capital One is a heavy user of cloud computing service Amazon Web Services, reducing the cost of its servers and potentially creating cost savings for end customers.  Deutsche Bank is investing heavily in cloud computing with a 10-year deal with HP Enterprise.	Indian bank <b>HDFC</b> uses software-as-a-service-based cloud services to more efficiently run its entire e-commerce business, its credit card acquiring business, and its merchant services, thus providing customers with more efficient services.		
	Mobilly	M-Pesa, a Kenyan startup, enables users to make and receive mobile payments using their smartphones, increasing financial inclusion to underserved communities and increasing customer convenience.	US-based Montgomery County Employees Federal Credit Union introduced fingerprint authentication for users of their mobile app, increasing security for existing customers.  Swiss-based Postfinance, in co-operation with other Swiss banks such as UBS and Credit Suisse, has launched Twint, a mobile	Japan's <b>E-Bank</b> provides 24-hour real-time electronic banking services without any physical branches or ATMs, creating a truly branchless experience for time-pressed customers who wish to avoid engaging with physical branches.		

## Malaysia Fintech Map 2018

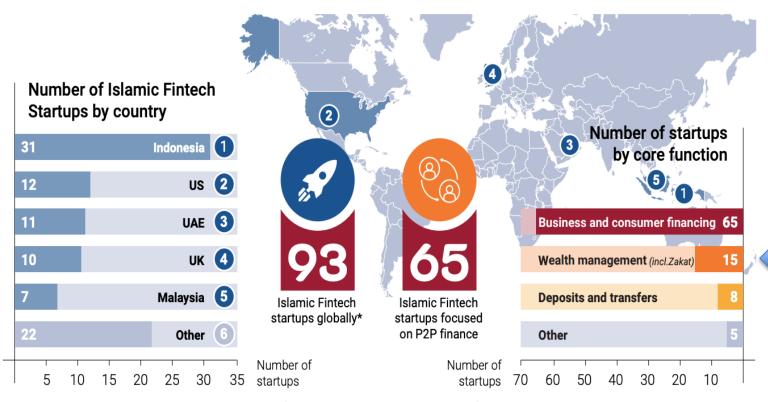


<sup>\*\*</sup> List of crypto exchanges based on Bank Negara list of reporting entities, some companies with questionable reputation were removed - inclusion in list is not an endorsement

<sup>\*\*\*</sup> There's been an addition of one more ECF Crowdfunding licensed issued but we were unable to find their logo

## Islamic Fintech

#### Islamic Fintech Ecosystem



\*Note: Includes customer-facing solutions only; excludes software and payment systems

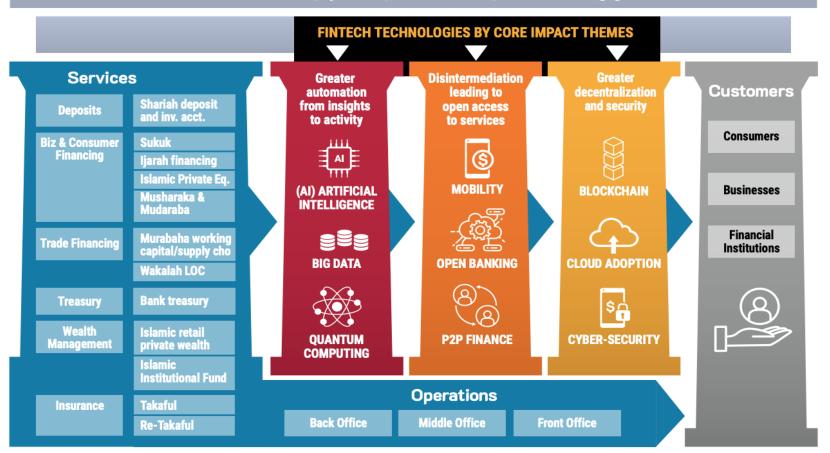
Key takeaway:

There is an emerging global Islamic Fintech ecosystem, with a strong focus to date on P2P finance.

#### Diagram #2: Mapping the Islamic Fintech Ecosystem

#### Islamic Fintech

Fintech technologies exponentially enhancing and disrupting 20th century Islamic financial services, operations, business models, and customer engagement.



## Fintech and state of innovation

**Diagram** – mapping of current state of innovation across Islamic financial services landscape

	BIG DATA	AI	QUANTUM COMPUTING	P2P FINANCE	OPEN BANKING	MOBILITY	BLOCKCHAIN	CLOUD ADOPTION	CYBER- SECURITY
Deposits	A			<b>B</b>					
Borrowing And Lending									
Treasury									
Trade Financing		3							
Wealth Management		<b>©</b>							
Insurance			O						
- <b>high</b> adoption - adopted by service	trend is substem ce area		moderate ado partially adopted l		- low ad	doption	- very limite	d vo	ery high tential impact

# Some notable usages of Fintech by startups (Islamic/conventional)

# Analytics and big data

• Emirates Islamic bank uses analytics that could automate 50% of the bank's recruitment processes.

# Blockchain in trade finance

 HSBC issued a Letter of Credit for US food and Agricultural firm Cargill via smart contract earlier in 2018.

# IA in wealth management

• Waheed (UK) raised USD 12 millions for Shariah compliant equity investment.

## Conclusion

- Fintech has not been fully embraced but it is growing at a remarkable pace.
- Islamic Wealth management in particular has not been disrupted by fintech yet despite the growing number of fintech startups.

# Thank you