FINTECH: MIDDLE EAST & AFRICA 2021

THE FINTECH LANDSCAPE, KEY SPOTLIGHT MARKETS AND FUTURE TRENDS REPORT

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Welcome to the **Fintech: Middle East & Africa 2021 Report**

The Middle East and Africa (MEA) is a vast region with a diverse range of cultures, languages, histories and economies. Home to more than 1.7 billion people, which is less than one-third of the world's population, it appears incongruous to describe the region of MEA 'as a whole' yet despite its broad geographical coverage, MEA as a whole does have relatable similarities that will be demonstrated in this report.

Due to the relatively recent developments of fintech, and its role in the wider economic development landscape of the MEA region, there is currently limited comprehensive literature, reports and academic research. Indeed, the aspiration behind this report is to generate awareness of the key fundamentals and activities happening in the fintech and wider economic development landscape to not only those operating in MEA but to a wider audience, too.

On a personal level, grasping the knowledge in a new light with a MEA focus, in parallel with the launch of *The Fintech Times*'s new MEA section in 2020, and understanding all aspects of the growing fintech landscape, coupled with my own background of the wider economic development context in the MEA region, has helped me formulate the reasonings behind the growth of fintech in the region.

On a final note, being referenced as both as a report and guide attempts to give various levels of the MEA-fluency covered. For those who know little of MEA, and in particular its fintech ecosystem, this report will be useful. However, even for those who are more in tune to the fintech landscape I hope the report will still be of relevance, as it not only confirms various assumptions (via quantifiable measures) but also clearly and concisely educates others on the space, especially novices to the MEA economy and its fintech arena.

A special thanks to the team at *The Fintech Times* who have supported me in getting this published – in particular Mark, Jason, Chris, Claire, Gina, Manisha and last but definitely not least Polly.

It has been a pleasure to continue educating the masses in a comprehensive way on the landscape not just in fintech but wider economic development. Special thanks to the various quotes and contributions that have featured throughout the report via catalyst profiles, fintech examples and other features.

EXECUTIVE SUMMARY
Fintech: Middle East and Africa 2021: Fintech Landscape, Key Spotlight Markets and Future Trends Report
presented by *The Fintech Times*

AIM OF REPORT The report gives a comprehensive overview of MEA's fintech landscape from an economic development context.

REPORT OVERVIEW Divided into three chapters, the report covers economic development that is impacting the growth of fintechs in MEA to its current situation (Chapter One). Later in Chapter Two, we use data to categorise 22 nations in MEA into a three-tier category system presented with their relevant economic development, tech and digital and fintech-specific indicators to show where they rank as fintech hubs. Chapter Three concludes the report by giving predictions and trends for this year and beyond with respect to fintech and its role in wider economic development. This report also offers an overview guide to summarise the MEA landscape.

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Published by THE FINTECH TIMES
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Chapter One: The fintech landscape in the Middle East and Africa highlights

An overview of the fintech landscape from a wider economic development context. Across much of MEA, a push from the highest levels of governments to diversify and boost economic growth has cascaded down via implementation to growth knowledge-intensive industries, such as fintech. In addition, in parts of MEA the growth organically has been evident where government support has helped further foster that acceleration. Focusing specifically on fintech, the MEA landscape is indeed growing but remains to still have further potential to develop as a whole. Highlights in Chapter One include:

- Global fintech market worth at least $100billion
- Within MEA, there are estimates of around 2,800 fintech solutions according to *The Fintech Times* (most are early-stage and MEA remains to be in its infancy).
  – Israel (1st) with 750 and UAE (2nd with 400+)
  – Turkey, Nigeria and South Africa each around 200 fintechs
- MEA is historically in banking and other financial means (much of MEA is still unbanked, traditional shopping habits in lieu of ecommerce) yet that is changing; Covid-19 accelerating it and prior to government digital strategy transformation initiatives via economic development
  – Many MEA solutions have been out of necessity – i.e. mobile banking solutions in poor regions in Africa
  – More affluent regions of MEA (i.e. Gulf Cooperation Council region) have some of world's highest smartphone usage
  – E-commerce has grown in MEA especially due to 2020 ongoing pandemic
- Aspects of wider fintech beyond financial services, such as insurance, technology, cybersecurity, artificial intelligence (AI) and growing catalysts evidence of a developing MEA ecosystem. Examples include:
  – Israel a leader particularly in cybersecurity
  – Saudi Arabia (and other economies) prioritising AI with the development of an AI strategy; aims to have AI contribute $135billion to GDP by 2030 (part of economic development vision called Saudi Vision 2030)
  – Catalysts of fintech associations, accelerators, VCs and family offices helping push fintech into a maturing market
- Fintech maturity appears to be concentrated in MEA which ties into its economic development – Israel and the GCC, especially the UAE, looks to be strong and Turkey. In Africa, previous research shows four countries as most active (Nigeria, South Africa, Kenya and Egypt) with other countries like Ghana and Rwanda also mentioned. This sets the foundation for Chapter Two.

Chapter Two: Key emerging and premier fintech hubs

After understanding the fintech landscape region in MEA, research suggests that it is in fact not equal in terms of activities and strengths as hubs. This report prefilters known and assumed initial data to conduct its own research of ranking selected countries through a tier-system in terms of their fintech hub status. Various economic indicators via public data were used to rank countries chosen from a pre-filtered MEA to 22 chosen countries in equal scoring of wider economic development indicators and economic development indicators (both tech and wider digital as well as fintech-specific). Various indicators that were across both categories that included GDP per capita, entrepreneurship, number of startups, number of fintech – to name a few – were factored into ranking the 22 pre-filtered countries in one of the three rankings: premier global hub (Tier One); emerging fintech hub (Tier Two); and early-stage (Tier Three).

Due to the difficulty of attaining a Tier One status, as there were only two countries that scored that in MEA, the emphasis focused on the potential of the MEA countries in the Tier Two countries (particularly those in the future who can increase their score and be one day a Tier One premier global fintech hub) as well as those in the early-stage country who scored high there were 'markets to watch' who, if trends continue, will be emerging fintech hubs. Highlights include:

- Israel and the UAE took the top premier global fintech hub status (Tier One) as not only do they both have strong advanced economies but also clear fintech and wider tech ecosystems that are mature (maturing in other aspects)
- Saudi Arabia and Bahrain scored high in the emerging fintech hub category (Tier Two); others in the emerging category include Turkey, Qatar, South Africa, Kenya, Egypt and Nigeria
- 'Markets to watch' – those that scored high in the early stage (Tier Three) category which, if continued to grow – will convert to emerging hubs. There are three countries among the list of 22 (Uganda, Morocco and Rwanda)

Chapter Three: Fintech predictions in MEA for 2021 and expanding on MEA's fintech ecosystem

The chapter begins first with predictions for fintech and its wider economic development context for this year – outlining key points addressed in the report previous but making forecasts on its continual or change for this year and potentially beyond. Afterwards, a moving forward ends the second half of the chapter, where four key points are addressed to help MEA as a whole further accelerate its fintech ecosystem at high-level. Aspects were addressed as current in the report but are packaged in the four themes as future considerations to help grow the sector for this year and beyond. Key aspects include:

- Economic development will play (as it had and will) a strong part in fintechs development as much of it has come from the top via national strategies
- Governments, as part of strategies or not, can help foster and mature their respective fintech ecosystems via access to finance (challenge in MEA) especially at the micro-level for many areas
- Covid-19 and digital transformation prioritisation prior will continue to transform the MEA consumer; many driven by necessary to embrace fintech solutions (i.e. the unbanked) will help solidify fintech's importance
- Further conversion of fintech in MEA from importing solutions from Europe, parts of East Asia or North America to increasing its share of innovation and home-grown products and services

This is the first report produced by *The Fintech Times* for the Middle East and Africa region.

Contents

i. The fintech landscape in the Middle East and Africa

The following section delivers an overview of the MEA region, initially highlighting the region as a whole before cascading down towards the fintech landscape and its wider key ecosystem, including the financial services industry and the technology sector.

Firstly, a glance at the overall landscape, economy and wider economic development in MEA will showcase the diversity and various levels of advancements. Afterwards, key aspects of the fintech ecosystem will be provided, including a focus on the financial services industry, particularly the banking sector. Other aspects that encompass fintech, such as the insurance industry, will also be discussed, as well as concepts such as Islamic Finance. The section will conclude by looking at other aspects of fintech and the wider components that impact it.

A OVERVIEW OF LANDSCAPE AND ECONOMY OF THE MEA REGION

i. Countries in MEA

The MEA region is vast – spanning mainly across two large continents. Including Israel and Turkey, MEA has a population of more than 1.7 billion people, with Africa alone home to 1.35 billion. Given that the territory of MEA is immense, each region and even each country has its own diverse culture, language and history.

In terms of Africa, the continent is home to 54 countries according to the United Nations. If counting the disputed territory of the Western Sahara that would make it 55, which is the number of current member states of the African Union (the continental union that aims to have 'an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena')[1]. From the map of Africa, the African Union divides the continent into five regions (a sixth which is the African diaspora).

In the Middle East, the region brings with it a rich history whose territory spans from both Asia and Africa. Due to shared language and similar and strong cultural ties, the Middle East and North Africa (MENA) is often commonly referred to and categorised as the Middle East. Other terminology that has also sprung up has included MENAT, which references MENA plus Turkey.

The context of this report identifies the following nations as part of MENA: North African countries (Algeria, Egypt, Libya, Morocco, Tunisia), Gulf Cooperation Council members (GCC – the political and economic region in the Arabian Gulf region of six-member nations: Saudi Arabia, Bahrain, Oman, Qatar, Kuwait and the United Arab Emirates), Yemen, Iran, Iraq, the Levant Region (Jordan, Syria, Lebanon, and Israel) and Turkey.

Due to the importance of Arab culture in MEA, the Arab world will be referenced in this report. This mainly refers to the countries in MEA that not only speak Arabic but are also members of the League of Arab States (Arab League), the association of independent MEA countries whose peoples are mainly Arabic speaking. These include Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates and Yemen. It is worth noting that Syria's membership to the Arab League has been suspended.[2]

Finally, within the context of the Arab World, there is also the Gulf region – with this report highlighting mainly the Gulf Cooperation Council. Founded in 1981, it is a political and economic alliance and often referenced in the region and beyond.[3]

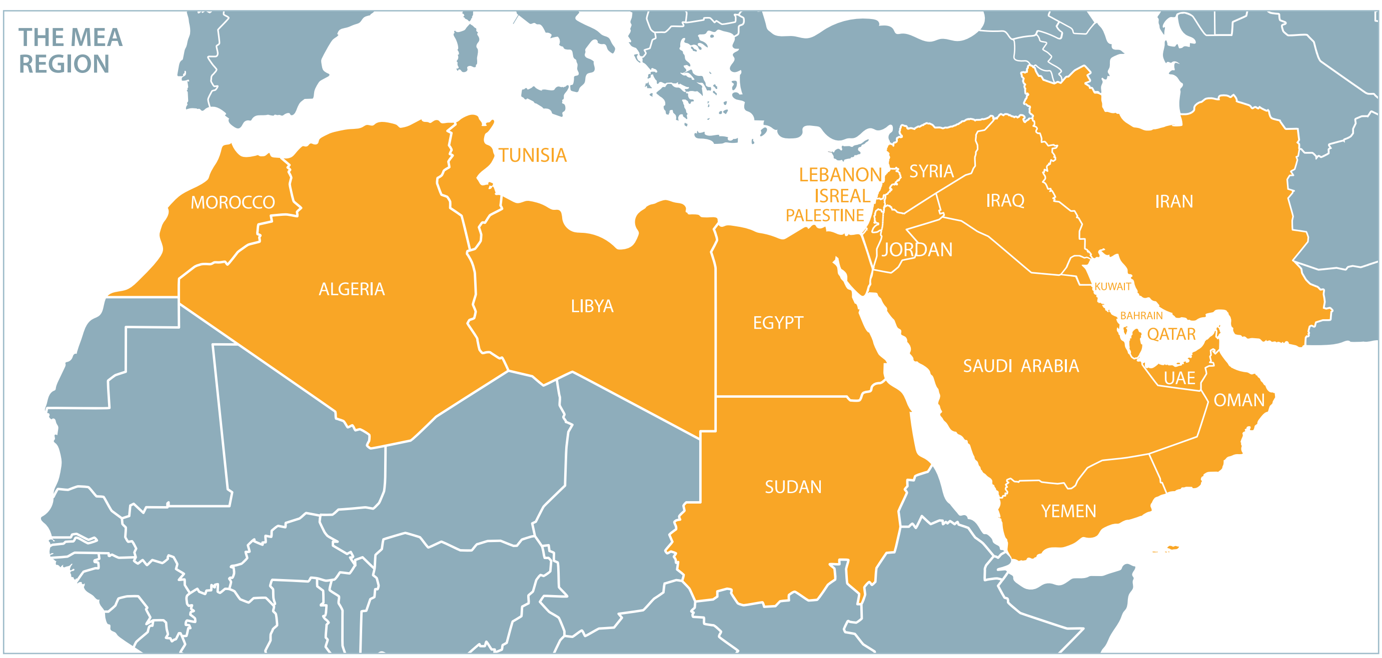
ii. Economies & economic development

The diversity of MEA can be seen across its wider economic development, as it's home to some of the most advanced economies as well as some of the poorest regions in the world. With respect to gross domestic product (GDP), it contains some of the world's highest GDPs per capita, particularly in the GCC. For example, the GDP of the United Arab Emirates is at $43,103, Qatar with $68,793 and Israel with $43,641. It is also home to much of the world's lowest per capita, with nine of the 10 lowest per capita countries being in Africa.[4]

1 MIDDLE EAST AND NORTH AFRICA

The Middle East has more advanced economies compared to much of the African continent. The MENA region as a whole in terms of GDP per capita sits at $8,104.5, with the total GDP of the region being around $3.701trillion.

First, much of the advancement of parts of the MENA region, particularly in the GCC, has been with the discovery of oil and gas in the last century. For instance, after first discovering oil in Saudi Arabia in 1938 the Kingdom's economy quickly transformed. Today, according to OPEC, Saudi Arabia possesses around 17 per cent of the world's proven petroleum reserves, where the oil and gas sector accounts for about 50 per cent of GDP, amounting to 70 per cent of export earnings.[5] It has a GDP per capita of $23,129 and is the GCC's largest economy.



A similar story is seen across the rest of the GCC where all six nations have a higher-than-average GDP per capita compared to the MENA average, with Oman as the lowest in the GCC at $16,415. Saudi Arabia, alongside Turkey and South Africa, are the only MEA countries that are part of the Group of Twenty (G20), of which last year Saudi Arabia was the host country. According to its website, the G20 is 'the international forum that brings together the world's major economies. Its members account for more than 80 per cent of world GDP, 75 per cent of global trade and 60 per cent of the population of the planet'.

Despite the successes that the GCC region has enjoyed with oil and gas transforming their economies, there have been volatile periods with the price and demand of oil. An example of this can be seen last year when the World Health Organisation defined the coronavirus crisis as a pandemic, reducing the demand for travel due to various global lockdowns. Despite this, prior to Covid-19 the GCC region in particular had been creating various national economic development and diversification strategies, so there was already a push in the long term away from an oil-reliant economy.

All of the six GCC countries have variants of their own wider strategies of some sort (e.g. Bahrain Economic Vision 2030, Kuwait Vision 2035, Qatar National Vision 2030, Oman Vision 2040 and Saudi Vision 2030). The UAE, for instance, not only has other national initiatives, such as UAE Centennial 2071 and UAE Vision 2021, but also variants in the respective Emirates, such as Abu Dhabi Vision 2030. For the most part, despite each being tailored to their respective nations, they all have an overall strategy for their economies to achieve some of the following aims:

- **Diverse economic sectors** – To have economies that are not reliant on just one sector, but various sectors which include the likes of tourism, transportation, tech and fintech.
- **Drive innovation and entrepreneurship** – Promote innovation in the future economy and drive much of that to be developed with local talent and ideas as well as promoting entrepreneurship to drive these ideas.
- **Digital transformation** – Digital not only drives sectors, such as tech and fintech, but also wider adoption of technology to prepare for a future digital world (with Covid-19 further justifying the importance of strong technology infrastructure globally.)
- **Job creation and economic growth** – The pillars of economic development are job creation and economic growth in general; the various GCC strategies embody them.[6]

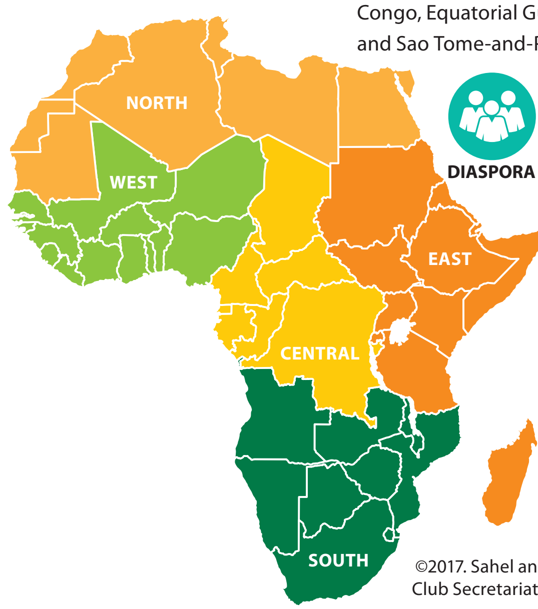
Beyond the GCC, the rest of MENA has various levels of economic development. Another advanced economy in the region beyond the GCC is Israel. Known as a 'startup nation', Israel has an economy that has brought with it various innovations across a wide range of sectors in tech.[7] Due to their large populations and economic potential, MENA countries, such as Egypt and Turkey, also have relative emerging economies. In addition, countries such as Lebanon have suffered economic hardship in recent memory and due to the pandemic the situation has not improved.

2 AFRICA

Generally speaking, much of Africa has the economic potential to grow and further develop its wider economy. As highlighted earlier, the continent is still home to nine of the 10 poorest nations globally through GDP per capita measurements. Nevertheless, Africa is difficult to summarise due to its wide variety of economic development.

For example, it is noted that countries in the African continent with the highest GDP per capita in 2019 were Seychelles at number one with $14,962 followed in second place with Mauritius at $10,949, Equatorial Guinea at $9,238 in third place, Gabon in fourth place with $9129, Libya in fifth with $8,122, Botswana in sixth with $8,093, South Africa in seventh with $7,346, Namibia in eight with $5,766, Swaziland in ninth with $4,819 and Algeria in tenth with $4,711.

NORTH Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia and Sahrawi Arab Democratic Republic (within Western Sahara – disputed)
SOUTH Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia Swaziland and Zimbabwe
WEST Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo
EAST Comoros, Djibouti, Ethiopia, Eritrea, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda
CENTRAL Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon and Sao Tome-and-Principe



THE SIX REGIONS OF THE AFRICAN UNION
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According to a report by the African Development Bank Group, *African Economic Outlook 2020*, Africa's economic growth had stabilised pre-Covid and is expected to pick up, however does remain below historical highs. The continent's growth from 2014 to 2019 has slowed down from a decadal average of five per cent to around three per cent. The growth, according to the same report, varied across the continent, where in 2019 East Africa was the fastest-growing region while North Africa continued to make the largest contribution to Africa's overall GDP growth, thanks in part to Egypt's growth. Before Covid-19, six African countries were among the world's 10 fastest-growing economies: Rwanda at 8.7 per cent, Ethiopia at 7.4 per cent, Côte d'Ivoire at 7.4 per cent, Ghana at 7.1 per cent, Tanzania at 6.8 per cent, and Benin at 6.7 per cent.[8]

Despite this, Africa is still generally underdeveloped. For example, looking at infrastructure, 31 per cent of the global population does not have 3G coverage, while 15 per cent have no electricity. In Sub-Saharan Africa, some 600 million people (almost two-thirds of the region's population) do not have regular electricity and 800 Africans still do not have internet; these figures were also pre-Covid, so most likely did not improve. Youth unemployment, which will be covered later, also remains very high, with Uganda and East Africa having a youth unemployment rate of around 80 per cent despite having talent in the area. Additionally, Africa in 2015 had a poverty rate of 41 per cent.[9]

One major development was the African Continental Free Trade Area (AfCFTA). According to the World Bank report, *The African Continental Free Trade Area: Economic and Distributional Effects* further highlights other benefits. First, extreme poverty would decrease across the continent as a result of AfCFTA. It is estimated that 30 million Africans would be lifted out of extreme poverty, boosting the incomes of almost 68 million other Africans living less than $5.50 a day. West Africa potentially would see the biggest decline of 12 million Africans out of extreme poverty (over a third of the total for all of Africa), following Central Africa with 9.3 million Africans, then Eastern Africa at 4.8 million and Southern Africa at 3.9 million.

A key aim for free trade agreements globally is the reduction of bureaucracy to help facilitate trade between member countries and this of course applies to AfCFTA. The same report also highlights that of the estimated $450billion in income gains from AfCFTA by 2035 (this would be a gain of seven per cent), $292billion would come from stronger trade facilitation. As mentioned, it would be a result of reduced red tape with streamlined and simplified customs.

Other benefits include that AfCFTA will increase Africa's exports by $560billion, which would come mostly from manufacturing. It is also predicted it will spur larger wage gains for women (at 10.5 per cent) than for men (9.9 per cent) and that AfCFTA will boost wages for both skilled and unskilled workers – 10.3 per cent for unskilled workers, and 9.8 per cent for skilled workers.[10]

There are African countries who are also looking at or have prioritised economic development via their own national strategies and implementations. For instance, Egypt has its own strategy called Egypt Vision 2030 that is akin to its GCC neighbours. Similar, yet unique to much of the African continent, its transformation aligns with reducing poverty or rebuilding economies (whereas the GCC generally has far more advanced economies thanks in large part to oil revenue and is looking for diversification beyond just oil and gas).

B THE ECOSYSTEM THAT ENCOMPASSES FINANCIAL TECHNOLOGIES IN THE MIDDLE EAST AND AFRICA

Financial technologies, or fintech, has impacted a wide range of sectors and wider national government initiatives in MEA. It is important to first look at both those initiatives, as well as sectors.

i. WIDER ECONOMIC DEVELOPMENT DIVERSIFICATION AND DIFFERENT FOCUSES

Generally much of MEA has or is currently undergoing massive economic development and diversification transformations. There are wider aspirations for the respective nations who are currently architecting, approving and/or implementing their economic development and diversification strategies. However, how does this affect fintech and its wider sectors that it encompasses such as financial services and tech?

For instance, in the GCC and others, such as in Egypt, much of their economic strategies have prioritised key aspects where fintech have thrived – mainly in financial services. Within Saudi Vision 2030, on 24 April 2017, the Council of Economic and Development Affairs (CEDA) initially launched 10 delivery programmes to realise Vision 2030; one of those is the Financial Sector Development Programme (FSDP). According to the Vision 2030 website: "The FSDP's role is to create a diversified and effective financial services sector to support the development of the national economy, diversify its sources of income and stimulate savings, finance, and investment."

As a result of FSDP's implementation, Fintech Saudi was launched by the Saudi Arabian Monetary Authority (SAMA) – it recently changed its name to the Saudi Central Bank but retained the SAMA acronym – in April 2018. Fintech Saudi acts as a catalyst for the development of the financial service technology/fintech industry.

In the tech space, examples include Smart Dubai 2021. According to its website, Dubai aims to be a world-leading city by 2021. Much of Dubai's services are already digital – which include applying for residency visas across its various stages to even parking fines – where much can be done from a mobile device. Overall, the UAE has been a leader in digital transformation and ranks first in the Arab World and 12th globally according to the *IMD's World Digital Competitiveness Ranking 2019* report.[11]

In Africa, despite it being less advanced for economic development compared to the GCC, there have been strong acknowledgements by various governments to also diversify, innovate and digitalise their economies.

In countries where they rely mainly on one commodity such as oil and gas, as in Nigeria and Angola, there have been various levels of discussions or more advanced pushes towards economic diversification. Case in point with Angola, where the Angolan government is implementing a macroeconomic stabilisation programme focused on strengthening fiscal sustainability, reducing inflation, promoting a more flexible exchange rate regime and improving financial sector stability.

Its national development programme includes strengthening financial sector resilience, recapitalising weak banks and restructuring the largest state-owned bank. It plans to privatise most of the 195 state-owned companies or companies in which the state participates by this year (the coronavirus could of course delay this).[12]

ii. The demographics of MEA and its relation to fintech: Young, mobile, diverse and informal

Despite the large and diverse range geographically of the 1.7 billion-plus people in the MEA, there are similar themes that can help put the region into context. The following gives a glimpse of the demographics of MEA to help understand its wider economic development:

1 YOUTH

As younger populations adapt and are more flexible to changes, MEA is in a unique position with a young population overall. Around 30 per cent of the population is aged between 15 and 29 – representing around 110 million people – the largest number of young people to transition to adulthood in the region's history. In terms of young people ages 15 to 24, they are 20 per cent of the populations in Egypt, Iraq, Lebanon, Libya, Morocco, Oman, Sudan, Syria, Tunisia, Yemen, Jordan, Algeria and Saudi Arabia. In addition, the population of the Middle East's youth is highly educated – 70 per cent have achieved a secondary level and primary level is nearly universal.[13]

Africa also has a young population. According to the US Census Bureau, there were approximately 241 million people aged 15 to 29 living in Africa in 2010, which represented approximately 28 per cent of the overall population of the continent, while 63 per cent of Africa's overall population was below the age of 25. Africa is home to 19 of the 20 youngest countries in the world in terms of age.[14] Unfortunately, unlike the Middle East (with countries in the Arabian Gulf, such as UAE and Qatar as well as Israel, with some of the highest standards of living in the world) much of Africa remains poor. Nevertheless, the population of Africa continues to grow rapidly. However, Africa has the highest rates of child mortality (one in six) and malnutrition (36 per cent) in the world in children up to five years of age. The continent also has the worst schooling outcomes in the world (51 per cent out of school) in the age group from six to 14 years.[15]

2 YOUTH EMPLOYMENT

According to data from the World Bank in September 2020, overall youth unemployment rate (percentage of total labour force ages 15 to 24) from the MENA in 2020 was at 26.7 per cent. This showed a slight decline from a 2018 high of 27.48 per cent and in 2019 of 26.94 per cent.

In Africa, by 2030, one-fifth of the global labour force, with around one-third of the global youth labour force – will come from the continent. Africa presents a challenge, as only three million formal jobs are created annually despite 10 to 12 million youth entering the workforce.[16]

YOUTH UNEMPLOYMENT IN THE MENA REGION 2020 (% of total labour force aged 15 to 24)

Yemen, Republic of	23.9
West Bank and Gaza	41.6
United Arab Emirates	7.5
Tunisia	36.5
Syrian Arab Republic	21.1
Saudi Arabia	27.9
Qatar	0.3
Oman	13.7
Morocco	21.9
Malta	8.1
Libya	50.9
Lebanon	17.8
Kuwait	16.5
Jordan	35.0
Israel	7.0
Iraq	25.2
Iran, Islamic Republic of	27.2
Egypt, Arab Republic of	30.0
Djibouti	21.0
Bahrain	5.3
Algeria	29.7

Source: World Bank[12-13]

3 EXPATS, MIGRATION & REMITTANCES

MEA is vast; not only does it have some of the world's richest countries (in the GCC) but also some of the world's poorest (mainly Africa). As a result, there is a lot of movement between people and their money.

Due to poverty in the region, it could be said that one of the biggest exports is people. In current times, African migration has not only meant going to other more relative economies in Africa, such as in South Africa, but beyond. People also migrate to countries in the Middle East as well, with various economic and political challenges, such as in Syria and Lebanon.

On the contrary, the Middle East mainly in the GCC plus Israel, has attracted people in recent memory from across the world. In the GCC, the UAE – home to Dubai and Abu Dhabi – non-locals (or expatriates) make up more than 80 per cent of the population. In other words, four out of every five in the UAE are foreigners/non-Emiratis.

With regards to MEA, in particular the GCC, many migrant workers who live and work there come from South Asia, such as India, Pakistan and Bangladesh, South East Asia (in particular the Philippines and Indonesia) and many parts of Africa – both from lower-income African countries to even ones who are more on the middle-income bracket, such as Egypt.

Remittances are important for the countries that receive them, as they play a large part in the country's GDP. For instance, in India, the world's largest recipient of remittances and one of the largest communities living abroad at nearly 16 million according to the United Nations Department of Economic and Social Affairs, the country received $80billion in 2018 from remittances; there were more than 30 million non-resident Indians (NRIs) and persons of Indian origin (PIOs) residing outside of India the same year.[17]

Another top sender of migrant workers is the Philippines,[18] which in 2019 sent remittances back totalling more than $30billion, approximately 8.5 per cent of the country's GDP.[19] They are even referred to in the Philippines as overseas Filipino workers (OFW). An example of a MEA country that relies heavily on remittances is Egypt and its 100 million population. Despite being more affluent than much of Africa, many Egyptians do go overseas. Egypt in 2019, according to the World Bank, received more than $26billion in remittances, as many workers go to the GCC, as well as Jordan.[20]

The hard-earned money from workers from countries like India, the Philippines and Egypt (with significant populations in MEA mainly in the GCC) have allowed for many of the families back in their home countries to survive and help pay for education tuition fees, food to even buying a house or setting up their own business.

It is worth noting that citizens of MEA's wealthy countries migrate as well. *Leaving the Promised Land – A Look at Israel's Emigration Challenge*, released by the Shoresh Institution for Socioeconomic Research, found that for every Israeli with an academic degree who returned to Israel in 2014, 2.6 Israeli academics emigrated (in 2017 that figure went up to 4.5).[21] The so-called startup nation has often seen much of that talent and innovation go in particular to the US. Nevertheless, this heavy migration – both leaving and also receiving – showcases the uniqueness of MEA in respect to mainly remittances. The fintech technology that has been added to help both the working class and more affluent professionals can be seen across MEA, particularly with the former. Often, many of them are unbanked and historically this has meant wiring money to their loved ones from, for example, Dubai to their home country via a money house, which often incurs very high fees.

Finally, with 2020, it has been projected that hundreds of thousands of expatriates in GCC countries have left due to Covid-19 – some estimate this figure to be up to 10 per cent of ex-pats.{22} Countries such as the US, which from the start of the coronavirus lockdowns in 2020, saw its unemployment rate skyrocket over 10 percentage points to 14.7 per cent according to the US Department of Labor.[23] Therefore, most countries – whether rich or poor – have not been immune to the effects of the coronavirus.

A challenge with many blue-collar workers (or referred to commonly as migrant workers) concerning financial services is many of them are unbanked (both in their current country of residence and their country of origin) and often have to send money back home regularly to support their families. Going abroad in the first place to support their families is almost always the main reason for lower-skilled migrant workers who have to leave their loved ones behind.

According to a World Bank's migration and development brief, due to the Covid-19 pandemic cascading down across the global economy, the amount of money migrant workers plan to send home is projected to decline 14 per cent this year compared to pre-Covid levels in 2019. All regions globally will be affected, with respect to MEA those declines in 2020 and 2021 will be MENA (eight per cent and eight per cent) and Sub-Saharan Africa (nine per cent and six per cent).[24]

Nevertheless, as prior to Covid-19 fintech solutions in remittances will play a large role. This will help current and potential customers find an effective and cost-saving way of getting their hard-earned money back to their families in their home countries. This has been evident, for example, with a growing number of companies from MEA that offer these solutions, such as the UAE's RISE and Qatar's C Wallet and Kenya's M-Pesa.[25]

4 CONNECTED AND MOBILE FRIENDLY

MEA overall has a pretty extreme reach in terms of mobile connectivity. Parts of MEA, such as in the GCC, have some of the world's highest usage of mobile phones, whereas in much of the region there are still millions without even internet let alone a smartphone. In MENA, it is estimated that by the end of 2019 nearly 280 million people in the region (45 per cent of the population) were connected to mobile internet but still 350 million people are yet to have mobile internet connectivity. 5G looked to launch but got delayed due to Covid-19 and will most likely move forward in 2021.[26]

As mentioned, 800 million people in Africa still do not have internet access. However, this gap in services has led to innovative solutions in response. A report from the International Monetary Fund (IMF) called *FinTech in Sub-Saharan African Countries* highlights that Sub-Saharan Africa has become the global leader in mobile money transfer services, which has brought widespread access to financial services. It says: "East Africa is leading in mobile money adoption and usage. Built on an appropriate pricing strategy to attract customers, suitable regulation, and a reliable and trustful network, Kenya represents today one of the most successful cases regarding the use of mobile money."[27]

According to the *GSMA's 2019 State of the Industry Report* on Mobile Money, the mobile money industry recorded astonishing growth with roughly $730billion global transactions in 2019. The organisation reports Africa as one of the fastest-growing mobile money transaction continents in the world with an estimated 190 million active wallets.[28] 2021 will most likely continue to see MEA – whether it's the GCC with some of the world's highest mobile penetrations or even poverty-stricken African countries – offer mobile money payment solutions.

Over 10 years, Africa's total inbound international internet bandwidth capacity increased by more than 50 times; the operational fibre-optic network extended by almost four times; mobile cellular subscriptions more than doubled, and about 58 per cent of the population now live in areas covered by 4G networks.

Africa has more than 480 million mobile money accounts, more than all other developing regions taken together. More than 500 African companies provide technology-enabled innovation in financial services (fintech). The valuation of some African startups exceeds a billion dollars (unicorns). Over 640 tech hubs are active across the continent – this is according to the 2021 edition of Africa's Development Dynamics.[29]

5 INFORMAL - MEA HAS A LARGE GIG ECONOMY

According to the International Labour Organisation (ILO), around two billion workers (60 per cent of the world's employed population ages 15 and older) spend at least part of their time in the informal sector.[30] The gig or informal economy play a role in much of the world and that resonates in practice with Africa, where 85.8% of employment, and 95% of youth employment is informal.[31]

Other statistics show the importance of the gig economy as well as showing its relevance to MEA. For instance, from 2004-2010 the informal employment as a percentage of non-agricultural employment showed South Asia at 82 per cent, followed by Sub-Saharan Africa at 66 per cent, East and South East Asia at 65 per cent, Latin America at over 50 per cent and the MENA region at 45 per cent.[32]

With regards to the Middle East and North Africa, middle-income Arab nations (Lebanon, Egypt, Jordan, Morocco, Tunisia and Libya) have significant populations of workers that would be classified as informal. Lebanon has 55 per cent of its workers in this category and neighbouring Jordan has a similar landscape. In Egypt, 40 per cent of the country's GDP is estimated to derive from the informal economy, while in Morocco in 2014 almost 2.4 million were working in the gig economy.[33]

The importance of the informal economy in MEA has clearly had an impact due to Covid-19. Due to many people globally working in the gig economy, where often face-to-face interaction has been important, lockdowns coupled with uncertainty and a change in consumer habits have had a large impact on the informal sector.

For instance, a report by Fairwork Foundation analysed 120 platform companies from 23 countries worldwide including; Middle Eastern countries of Egypt, Morocco, Lebanon, Algeria, Tunisia, Jordan and the UAE (companies included: Uber, Uber Eats, Careem – acquired by Uber[34], Swvl, Jumia, Zomato and Deliveroo). It found that just five of these companies had any direct policies to increase pay rates or compensate for lost pay due to Covid-19; there was little help for workers struggling to pay their costs such as car loans.[35]

It is also worth highlighting that 1.7 billion of the world's population remains to be unbanked, where much of that percentage lives in the MEA region.[36] This includes Egypt, where around two-thirds of the population is unbanked[37] and it was estimated in 2014 that 350 million adults in Sub-Saharan Africa were unbanked.[38] Another 2018 report from the World Bank suggests that only eight per cent of the adults across the Arab world belong to the banked population, while 23 per cent are underbanked. More than two-thirds (69 per cent) of adults remain unbanked. Therefore, the financial inclusion opportunity in the Arab world is 92 per cent.[39]

The informal economy, therefore, plays a large role and sectors like fintech have a strong component in MEA. This is similar in many ways to other parts of the world, in particular with emerging economies.

6 DIGITAL TRANSFORMATION – COVID AND PRE-COVID

Even before Covid-19 much of the world was already focusing on wider digital transformation. As highlighted in the economic development strategies subsection, much of MEA already has developed their own strategies or is currently doing so. This cascades down in its implementation to where customers, both organically or through transition via new solutions, use the technology in question.

Digital transformation was already a priority on a global scale, but the 2020 year highlighted its importance even more so. This was also felt in MEA, changing the mentality and putting more people than ever in the pro-digital camp.

For example, payment firm Checkout.com polled more than 5,000 consumers in September 2020 in the UAE, Saudi Arabia, Egypt, Jordan, Qatar, Kuwait, Bahrain and Pakistan. Across the eight countries, 47 per cent of consumers say they expect to shop online more frequently over the next year. Only 15 per cent expect their online shopping frequency to decline while the remaining 38 per cent expect it to remain about the same as now.[40]

In addition, one in nine transactions at the point of sale (POS) are now contactless. Mastercard for instance increased its contactless payment total by more than 66 per cent to $136million across MEA last year. Before the pandemic, in 2019 Mastercard saw a 200 per cent increase in contactless payment in MEA. Globally, contactless by 2025 is expected to grow to $18billion, which is almost double what it is now from 2020.[41]

The potential overall for digital such as in Africa is large. A recent report by Google and the International Finance Corporation estimated that Africa's digital economy has the potential to contribute $180billion to the broader economy by 2025, representing more than five per cent (5.2) of the continent's GDP. This figure by 2050 can rise to $712billion and attribute 8.5 per cent of the continent's GDP.[42]

Around two billion workers (60 per cent of the world's employed population aged 15+) spend at least part of their time in the informal sector. The gig or informal economy plays a role in much of the world and that resonates in practice with Africa, where 85.8 per cent of employment and 95 per cent of youth employment is informal

iii. The number of fintechs and what they do

In 2019, global fintech investment pulled $137.5billion, according to a report by PwC, with other sources showcasing similar figures. Meanwhile, *The Fintech Times* research shows that the global fintech market is valued at least $100billion. Due to the pre-Covid-19 era and the global trend to go digital, coupled with the effect of the pandemic, predictions of the fintech sector shows growth, with compound annual growth rate ranging from under 10 per cent to as high as almost 25 per cent. Research from the same sources show that the global fintech sector could hit $300billion in value as quickly as 2025.

The MEA region is seeing a major increase in the fintech market, with a rise in startups – both locally produced innovations and international fintechs. This is likely due to the increasing internet and mobile phone usage in the region, traditional banks undergoing digital transformations to keep pace with technology and the growth of the Islamic banking industry in the Middle East. It's clear that there's great opportunity in these changes for the region to become digital first for banking and financial technology, allowing great scope for fintech startups to appear in market gaps and solve a consumer need.

This report guide, based on research compiled across a wide range of sources, estimates that the total number of fintech startups and solutions across the Middle East and Africa region is sitting at approximately 2,800 fintech startups. This would include very early-stage companies, applications and other solutions in addition to more established small and medium enterprises (SMEs) and the few large fintech players and solutions across MEA. This also includes both international operations who have set up a presence in MEA, as well as local startups.

Both Africa and the Middle East will be broken down in their regions to understand more (North African countries will be categorised in the Africa category).

Africa

There's a wide range of estimates of the number of fintechs in this region. The *2020 Africa FinTech Report* from MEDICI, for example, estimates that the continent has more than 473 active fintechs and the sector received more than $821million in investments from January 2018 to November 2020.

Another source, AfriCo, estimates there are 674 active fintech companies in Africa where 80 per cent have domestic roots. AfricCo data shows last year had under 100 (97) venture capital deals in the African fintech sector valued at $250million, which is a decline from 2019 at $678million.

Similar to other research available, the number of fintechs and their activity suggests a concentration particularly in the four African countries of Egypt, Kenya, South Africa and Nigeria. AfriCo data revealed that last year 82 per cent of total fintech investments in the continent went to the four countries. Similar but smaller research by *The Fintech Times* confirmed this initial trend of the four countries, but also highlighted countries, such as Ghana, Rwanda, Tanzania, Uganda and Mauritius, with noticeable fintech activities.

The following gives an idea of the number of fintechs in the region with estimates that the fintech landscape in Africa could be as high as up to 1,000 fintech startups:

ESTIMATED NUMBER OF FINTECHS AND STARTUPS IN THE AFRICAN CONTINENT

Country	Estimated no.of fintech startups	Estimated no. of startups
Egypt	70+	200+
Kenya	150	600
Nigeria	200+	3300+
South Africa	200+	660+
Ghana	70+	500+
Rwanda	44	270
Tanzania	24	159
Senegal	24	128
Tunisia	16	300
Morocco	20+	500
Mauritius	19	-150
Uganda	70+	167+

Source: *The Fintech Times* and various [49-66]

In terms of what fintechs in Africa do, based on investments from 2020, fintechs in payments received a quarter of all investments in the continent. A breakdown of investments into African fintech startups, according to AfriCo:

Lending	23.71 per cent
Financial planning and management	18.56 per cent
Payment processing	13.4 per cent
Digital banking	12.37 per cent
Mobile payments	10.31 per cent
Other	21.65 (led mainly by digital wallets and insurtech)[67]

Middle East

In MENA, around 85 per cent of fintech firms operate in the payments, transfer and remittances sectors.[68] When looking at fintech offerings in the example countries (see table above), it is clear that a large proportion of thriving fintechs also come from paytech. For example, in Bahrain one of the first and largest fintechs was Payment International Enterprise (PIE), a payment service provider, card issuer, e-wallet and e-money issuer.

When focusing on solely the Middle East, the clear leader in the region comes from paytech, whether that's payment solutions for businesses, e-wallets or digital/electronic payments, there are several fintech companies that particularly thriving in this area. A particular example of this can be seen in the UAE as, although the majority of all transactions in the country are made by cash (around 70 per cent), the country plans to become cashless in 2021 – reflected in fintech offerings.

Paytech doesn't completely sweep the board, however, with crowdfunding, credit and loans, blockchain, banking, regtech and insurtech playing other significant roles. As highlighted, one notable area is the large expatriate community in the Middle East, particularly in the GCC region, where the remittances industry plays a large role in fintech – and increasingly so.

The following is a figure indicating the approximate number of fintechs and startups from various markets in the Middle East, plus Turkey and Israel. This area is estimated to have approximately 1,800 fintech startups. The figures showcase a number of important trends:

ESTIMATED NUMBER OF FINTECHS AND STARTUPS IN THE MIDDLE EAST REGION (INCLUDING TURKEY AND ISRAEL)

Country	Estimated no. of fintech startups	Estimated no. of startups
Saudi Arabia	155	+950
UAE	400+	2300
Bahrain	100	-200
Kuwait	28	200
Jordan	28	500+
Oman	5	150
Qatar	5	250+
Israel	750+	6000+
Turkey	200	1000
Lebanon	40	100+

Source: *The Fintech Times* and various [69-79]
Note: Northern African countries are included in the African continent number of fintechs and startups by *The Fintech Times*

- **Tremendous growth in a short time** – The fintech sector in Saudi Arabia has grown substantially since 2019, with the number of startups up by 147 per cent, according to *Magnitt's Fintech Saudi Annual Report*.[80] Magnitt's *2019 Fintech Venture Investment Report* also identified that while the MENA saw just 18 fintech deals take place in 2015, in 2019 there was a 417 per cent increase with 75 deals – the highest on record.[81] Despite the pandemic, more than 80 new fintechs were also registered in the first half of last year in Dubai's International Financial Centre (DIFC), according to CEO Arif Amiri in an interview with *The Fintech Times* in 2020.[82]

- **Concentration in key areas in MEA** – Of the estimated 1,000 fintech companies in Africa, the 11 countries listed is projected to take nearly 90 per cent of that share. Nigeria, South Africa, Kenya and Egypt, as well as Ghana and Rwanda, take a significant proportion in the number of fintechs in the continent, indicating a strong and growing fintech ecosystem.

  In the Middle East region (excluding Northern Africa), Israel, the UAE and Turkey stands tall as the top three countries with the most fintechs with nearly 75 per cent of the estimated 1,800 fintechs in that region (Israel alone has more than 40 per cent and when included in MEA as a whole Israel would have over one-quarter of total fintechs). In the remaining regional GCC countries, with the exception of Bahrain, fintech ecosystems are just emerging but with economic development diversification strategy implementations on the radar, future trajectories would suggest tremendous growth. For Bahrain, small by population and geographically, having around 100 fintechs is impressive.
  Of course, it is no surprise that Israel, with the largest number of fintechs and startups in all of MEA, is dubbed a startup nation.

- **Mix of local and international** – The majority of MEA fintech companies are not only a mix of local companies but also include a diverse range of international/foreign solutions. On the African continent, it is estimated that 80 per cent of all fintechs are local origin while the remaining 20 per cent are international solutions.[83]

- **Most are small and early-stage companies** – The majority of fintechs in MEA are small and at early-stage funding as demonstrated in various studies and reports that have included investment fundings either in the Middle East, Africa and or parts of each of them. With the Arab speaking world, according to CGAP, more than 75 per cent of startups have raised up to Series A. As companies grow, further investment will be required.[84]

- **Not many unicorns yet, but Israel leads the way** – It was an interesting time in 2020 for unicorns (companies valued at $1billion or more) in MEA. Firstly, Egypt's Fawry and later Saudi Arabia's stc pay joined the list of fintech unicorns – making history in their respective countries and region.[85] Israel and the UAE have also produced unicorns.[86] Success stories from companies in tech have included Israeli-born Waze (acquired by Google), fintech Payoneer which was born in Israel, UAE's Careem (acquired by Uber) and the UAE's Souq.com (acquired by Amazon). Finally, Nigeria also produced a fintech unicorn in the form of Interswitch (speculated after Visa took a minor stake in it).[87]

- **Still smaller in number of fintechs in comparison to other global fintech hubs** – Comparing the MEA region as a whole to fintech hubs then the number, which highlighted is estimated to be around 2,800 fintech startups, shows that there is still much more gap generally in the region with the volume of startups in the space. This is demonstrated when comparing the countries highlighted individually with those hubs (minus with the likes of those in particular Israel which fares well with its percentage and high number of fintechs). For instance, Singapore has almost 500 fintechs alone.[88] The UK, another major fintech global player, has more than 1,100 fintechs, with around 75 per cent of those based in London.[89] In terms of deals, more than a third of fintech industry deals (39 per cent) are made outside of fintech hubs of the US, the UK and China, according to CB Insight.[90] Fintech investments in MENA stood for only one per cent of the total global venture capital investment.[91] Nevertheless, given the short yet tremendous growth and aspirations of MEA, the growth in number of fintechs is impressive.

Examples of MEA companies in fintech

A sample of both local and non-MEA organisations with operations in the region

SARWA

Sarwa is the first and fastest-growing hybrid automated investment platform for young professionals in the Middle East. The company helps its clients build their wealth with a personalised, low-cost, diversified portfolio and provides access to on-demand investment experts. It is investing made smart, easy and affordable.

Sarwa is now incorporated in the Abu Dhabi Global Market (ADGM), regulated by the Financial Services Regulatory Authority of Abu Dhabi (FSRA), and is expanding regionally. It is the first fintech in the region to receive and graduate from the Dubai Financial Services Authority (DFSA)'s Fintech Innovation Testing Licence (ITL).

Mark Chahwan, CEO and co-founder of Sarwa, says: 'We launched Sarwa in early 2018 when we saw a need to answer. We have developed a solution that caters to this specific market: providing an investing platform that is simple, affordable, and accessible to everyone. It is about smart investing, which makes it easy for anyone in the region to build a better future and put their hard-earned money to work for them."

The three co-founders of Sarwa are (L-R) Nadine Mezher, Jad Sayegh and Mark Chahwan

NIUM

Nium is an advanced global payments platform that redefines the way consumers and businesses send, spend and receive funds across borders. Its goal is to make the movement of money seamless by being a universal plug for financial services. It devises agile, elegant and modular solutions for complex business problems and pride itself on creating financial infrastructure for every level of sophistication.

Nium's headquarters are based out of Singapore, with a presence and offices in: Australia (Melbourne), Hong Kong, India (Mumbai), Indonesia (Jakarta), Europe (Vilnius), UK (London), Japan (Tokyo), Malaysia (Kuala Lumpur), US (Seattle, LA, San Francisco), UAE (Dubai) and Kenya (Nairobi)

Ayoub Jemail, Nium's general manager in the Middle East, says: "As the UAE actively shifts from an oil-based economy towards becoming a knowledge-based digital economy, fintech is making inroads into the region at a pace comparable to many developed countries around the world. With the fintech market estimated to reach a value of $2.5billion across the broader MENA region and with 5G commercially available in Bahrain, Kuwait, Oman, Qatar, UAE and Saudi Arabia, we believe there is tremendous room for growth for what financial technology can achieve in this region."

CHECKOUT.COM

Checkout.com's cloud-based payments platform empowers forward-thinking businesses to drive revenue and expand effortlessly – with easy integration, customisation and unrivalled payment performance where they need it.

It has MENAP (Middle East, North Africa and Pakistan) offices in Dubai and Pakistan with presence across all MEA.

According to Mo Yusuf, regional manager MENAP at Checkout.com: "In recent years MEA has become a hotbed for FinTech activity and regulatory development. The events of 2020 only accelerated a growth that was already pacing at speed. Most notably, many cash-centric countries turned to digital overnight, representing a marked turning point for payments and ecommerce throughout the region. As a result, we're seeing a significant maturing of domestic e-commerce businesses in the region, driven by lots of innovation. As governments continue to foster that innovation and diversify their economies, they see how digital payments can be a powerful vehicle for economic progress."

PIGGYVEST

PiggyVest is the first online savings and investment app in West Africa and the largest digital and investment platform in Nigeria. It first launched as Piggybank.ng back in January 2016 as a savings-only platform. Three years later it rebranded to PiggyVest in April 2019 and began offering direct investment opportunities to users in addition to savings.

"Four years on, we have continued to deliver excellent service to our 1,000,000 users and counting, helping them manage their finances with simplicity and transparency. Combined, our users save and invest billions of Naira every month that they would have instead spent.PiggyVest is on a mission 'to give everyone the power to better manage & grow their finances', and we intend to be the best at this," said Odunayo Eweniy, co-founder and chief operations officer at PiggyVest.

Eweniy previously co-founded pushcv.com, one of the largest job sites in Africa with the largest database of pre-screened candidates.

FINAMAZE

Headquartered in Abu Dhabi, UAE

FinaMaze is a hybrid human-AI robo asset manager. It harvests the power of artificial intelligence to continuously monitor and automatically optimise its clients' investments, in line with each one's AI-designed risk profile – uniquely conceived from more than 4,000 possibilities.

According to FinaMaze, at a fraction of the cost of the traditional asset managers, its platform contrasts with the traditional approach that limits clients to few basic risk categories, such as conservative, neutral or aggressive.

"FinaMaze is a unique fintech that was built by senior bankers and asset managers with dozens of years' experience (in the trading floors of the largest and most notorious global banks (Barclays Capital, Citibank, Capital Group, Morgan Stanley, UBS), who understands the industry inside-out," says Mehdi Fichtali, founder of FinaMaze.

FinaMaze empowers its clients to invest their savings in the stock markets, in professionally risk-profile adjusted, (economic data-driven) and AI-conceived strategies. FinaMaze shields its clients from the emotional 'stock market betting' that lures some into highly leveraged instruments (CFDs) or encourages to bets on highly volatile and illiquid stocks... which unfortunately, for most, ends up in losing their hard-earned savings."

KUDA

With offices in Lagos, Nigeria and London, UK

Running a digital bank in Africa is challenging. It operates in a low-trust environment with a price-sensitive population, which means that it takes considerable effort to get significant product adoption. At Kuda, its value proposition has been hinged on free banking because a large segment of the population in Nigeria cannot afford to expend internet data on accessing a bank account.

To take care of its market's sensitivity to price, it has done away with most of the fees associated with traditional banking services including account maintenance charges and transfer fees. It is also set to launch a credit product for everyday people that removes the need to fill forms or put up collateral. It will offer credit strictly on the basis of account usage.

"We have begun to notice a significant shift toward digital-only banking services like the ones Kuda provides, particularly among the younger population of Nigeria. More people are making digital banks their primary spending accounts instead of a mere backup," says Nosa Oyegun, product manager for retail.

RISE FINTECH

rise is building a migrant financial services platform helping 250 million migrants across the world seamlessly manage their finances between host and home countries. It does this through innovative financial products like cross border BNPL and Xare – a remittance substitute which allows anyone, anywhere to share access to their accounts and credit with their family and friends – eliminating the need to move money. Xare brings both the migrant and their families on one platform enabling full control, transparency and security to the migrant. Based in the UAE, rise serves more than 300,000 customers across the region and now with Xare in India as well as in South East Asia.

A few common trends abound in MEA – large number of migrants, high unemployment as well as nascent financial services ecosystem. According to rise, all these form the backdrop to the set of product choices it makes – starting with building a seamless financial services experiences for the millions of migrants in the region. While building for migrants, it realised that migrants are a specific case for a generic challenge. Most people in the region support an extended family – whether in the country or outside and they lack the tools to manage their dependent finances seamlessly. This led to the creation of Xare – a tool which allows anyone anywhere to share access to their account or credit with their family or friends – effectively becoming a bank to their tribe.

Padmini Gupta, CEO of rise, says: "We are very excited to be building true sharing to financial services, building Xare as a tool to allow communities to support each other and extend financial access to those within their circle, who may not have that access. Almost 70 per cent of emerging market borrowers rely on their communities for their financial needs and Xare is a tool designed for these communities."

CWALLET SERVICES W.L.L.

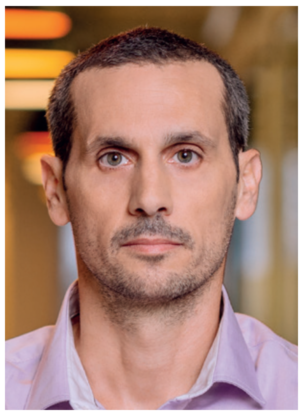
CWallet is a mobile money wallet that revolves around three basic principles payroll, payment, remittance. Allowing individuals to receive their salary on time, orchestrate payments either online, on delivery, or onsite allowing individuals to perform various financial transactions either locally or internationally.

Its mission is to digitally empower and enable individuals in the region by giving solutions to low-income and unbanked migrant workers, domestic helpers and blue-collar workers allowing them to access financial services that are currently unavailable to them.

Its vision is to become a premier fintech influencer creating loyal fans in MENA and ASIAN region by providing services beyond digital wallets, remittance and payment solution in

PAYONEER

Payoneer is a global digital payment platform and e-commerce enabler which empowers businesses around the world to go beyond borders, limits and expectations. Payoneer's mission is to democratise access to financial services and drive growth for digital businesses of all sizes from around the world. It recently announced its intention to go public via a special purpose acquisition company (SPAC) with an expected valuation of $3.3billion; the proceeds to be received from the transaction will be used to accelerate and grow Payoneer's global payment and commerce-enabling platform.



Eyal Moldovan, GM SMB Solution, says: "Payoneer was founded on the basis that technology and the internet were transforming commerce and making it possible for anyone anywhere to build and grow a digital business. Over the past 15 years, Payoneer has built a broad ecosystem that connects marketplaces, sellers, freelancers, gig workers, manufacturers, banks, suppliers, buyers and more into an integrated global platform. Payoneer's secure, regulated platform offers a global, multi-currency account to businesses of any size around the world, enabling them to pay and get paid globally as easily as they do locally.

"Local businesses are booming, with entrepreneurs joining the global digital market in larger numbers than ever before. In the past year, these trends have accelerated greatly as the result of Covid, which has fueled e-commerce and remote work, creating new opportunities. Our goal is to serve businesses in the MEA region and be their partner for growth, and we continue to expand our presence in the region to better serve these customers."

building a cashless society for all sectors including the bottom of the pyramid but not limited to unstable societies, unjust governments and even refugee camps in order to create jobs and micro entrepreneurs within the business ecosystem.

Michael Javier, the CEO and founder of Cwallet, says: "You can only do good while doing well and you can only dream if you're not just surviving. That's why our solution aims to empower mSME, home-made-business and fellow startups to cross the surviving mark so they can start thriving and dreaming to help themselves and to help others within the community. The world is small but the market is big for everyone to share and conduct businesses even for people that doesn't have bank accounts".

FINTECH GALAXY

Fintech Galaxy was founded in the United Arab Emirates in 2018 as a regional platform that fuels innovation in financial services, drives ecosystem collaboration and facilitates integration between financial institutions and fintech companies.

Fintech Galaxy's FinX22 open finance platform is redesigning financial services with an open API infrastructure that provides a seamless connectivity between fintechs and institutions across 22 Arab countries via a single API. The platform aims to revolutionise financial services in the region from payment solutions and budgeting tools to SME lending and credit scoring.

"The challenge we face is not when and how to go digital, but be digitally human. Financial institutions have to become intimate with the customer, understand their needs, behaviours and impact lives. Our vision of 22 markets, one API takes open innovation beyond banking, into finance and the wider economy," says Mirna Sleiman, CEO, Fintech Galaxy.

BENEFIT (BAHRAIN'S ELECTRONIC NETWORK FOR FINANCIAL TRANSACTIONS)

BENEFIT is the Kingdom's innovator and leading company in fintech and electronic financial transactions services, headquartered and established in Bahrain.

BENEFIT has invested in state-of-the-art technologies to provide reliable and trusted solutions and proud to be part of the national initiatives toward empowering the fintech industry. Recently, the Central Bank of Bahrain launched the national eKYC (electronic know your customer) platform, which was the first of its kind in the region targeting retail banks, financial services providers and money exchange networks. This is operated by BENEFIT in collaboration with the Information and eGovernment Authority (IGA) and under the supervision of the CBB.

BENEFIT has partnered with major entities in Bahrain, such as the Bahrain Fintech Bay, where it sponsors the annual Fintech Hackathon, a themed event which focuses on building a working prototype that could form the basis of a credible business. The hackathon brings together people with different skill-sets – primarily software developers, graphic designers and business people – to build solutions and develop a commercial case around them.

In addition, it is also a strategic partner for FinHub973, the region's first cross-border digital innovation platform that connects and facilitates collaboration between financial institutions and fintech under the supervision of the central bank of Bahrain.

iv. Sectors in focus: Financial services and insurance

Fintech plays a large role in the global economy both directly and indirectly with its elements, such as payment solutions or big data and regulations, encompassing a wide range of sectors. It is important to address how that plays a role across key areas in MEA, such as in financial services, banking and insurance

1. THE FINANCIAL SERVICES INDUSTRY – OVERVIEW, BANKING & ISLAMIC FINANCE

Research has highlighted the dynamics and changes happening across the Middle East. According to research from PwC, the GCC in particular has a well-developed, profitable and efficient financial services industry. Outside of the GCC, in much of the Middle East, the banking sector is dominated by public sector banks – which means that government intervention in credit allocation, losses and liquidity issues, and wide interest rate spreads (or spreads in rates of returns).[92]

Particularly in the GCC, banks in the Middle East are plentiful – home to not only local homegrown entities but also home to large multinational brands. Dubai has become the regional hub in the region for global multinationals and hosts several regional offices of banks and other financial institutions, including HSBC and JP Morgan Chase.[93]

Adoption of fintech in the MEA region compared to much in the rest of the world has been slower. This could be explained across various factors, such as cultural adoption to payments (much of the region remains to be unbanked for instance) and initial lack of innovation from the region to disrupt, especially in comparison to North America, Western Europe and parts of Asia. Nevertheless, that is changing. According to a report by Accenture in partnership with Dubai International Financial Centre (DIFC)'s FinTechHive, fintech is projected to account for eight per cent of Middle East financial services revenue by 2022.[94] The pandemic coronavirus that disrupted 2020 must likely also further accelerate that.

Much of the sector of Africa's financial services sector has changed from the 1980s until present. According to a report from the African Development Bank Group (AfDB), these reforms were aimed at restructuring and privatising state-controlled banks, part of structural adjustment policies (SAP) by the World Bank and IMF. These reforms also included auxiliary policies that helped ease entry and exit restrictions, interest and capital controls, and the overhaul of supervisory and regulatory frameworks within the banking sector.[95]

In terms of the banking industry, the MEA region offers various unique players that cater to the large population of the region, all with their own diverse differences reflecting the different countries cultural and economic conditions. There are many banks and financial institutions across the region that offer various services to individuals as well as businesses and corporations, operating both locally and across their borders.

a: LARGEST BANKS IN THE REGION

For this report, the top 30 largest banks in the entire region were ranked by total assets in US dollars. These figures were compiled from the banks' individual investor relations reports, using their annual data from the end of 2019. Note, only global headquartered banks were included and not non-MEA banks with regional offices in the region.

Qatar National Bank takes first place, with total assets of $259.5billion. Close behind it is United Arab Emirates First Abu Dhabi Bank, with total assets of $224billion. Interestingly, a bank from Qatar does not appear again on this list and though a Turkish bank does not appear until the 10th rank, seven banks from the country appear on this list, with Israel, South Africa and Saudi Arabia all with five entries each.

The 30 largest banks in MEA are concentrated in a few specific countries – mainly Israel, Turkey, South Africa, the GCC (mainly the UAE and Saudi Arabia) and Egypt. It is worth noting that other countries that did not make the top 30 list, such as Nigeria and Bahrain, also have sizeable numbers of local banks. Nevertheless, it shows that much of the region's financial services industry is concentrated in specific countries, the largest financial institutions in the region.

Much in MEA remains to be underserviced. In particular, financial penetration remains low in Africa. In Sub-Saharan Africa only less than a quarter has access to a formal bank account.[96] Therefore, despite an overall banking landscape in MEA, much of the region and its population is unbanked. Financial solutions, where fintech is playing innovative roles, is closing the gap where banks traditionally haven't.

INNOVATIONS IN BANKING AT MEA WITH FINTECH

Banks in MEA have also embraced fintech although compared to fintech hubs, such as in Europe, Asia and North Africa, have historically lagged. But there have been evident examples and the pandemic further cemented the importance of incorporating all aspects of a contactless and digital customer experience.

In the GCC, neobanks have started to appear – banks themselves have started to launch in addition to independent companies operating separate from traditional banks. Clear examples of those include Liv Bank (owned by Emirates NBD in Dubai) and Bahrain-headquartered Bank ABC's ila Bank. Africa has seen similar innovations with neobanks mainly around independent ones separate from traditional banks.[97]

THE TOP 30 LARGEST BANKS IN THE MENA REGION

Rank	Bank	Country	Total assets in USD
1	Qatar National Bank	Qatar	$259.5billion
2	First Abu Dhabi Bank	UAE	$224billion
3	Bank Leumi	Israel	$137.6billion
4	Standard Bank Group	South Africa	$136.6billion
5	Bank Hapoalim	Israel	$136billion
6	National Commercial Bank	Saudi Arabia	$135.2billion
7	Emirates NBD	UAE	$121.5billion
8	Abu Dhabi Commercial Bank	UAE	$110.3billion
9	Al-Rahji Bank	Saudi Arabia	$102.3billion
10	Ziraat Bank	Turkey	$99.5billion
11	National Bank of Kuwait	Kuwait	$96.5billion
12	Absa bank	South Africa	$83.2billion
13	Mizrahi-Tefahot Bank	Israel	$80.1billion
14	First Rand Bank	South Africa	$76.5billion
15	Israel Discount Bank	Israel	$76.2billion
16	National Bank of Egypt	Egypt	$75.1billion
17	Isbank	Turkey	$73.3billion
18	Riyad Bank	Saudi Arabia	$71.1billion
19	Saudi British Bank	Saudi Arabia	$70.8billion
20	Samba Financial Group	Saudi Arabia	$68.1billion
21	Halkbank	Turkey	$65.3billion
22	Nedbank Group	South Africa	$65.3billion
23	Yapi Kredi	Turkey	$62.2 billion
24	Garanti BBVA	Turkey	$61.4billion
25	Vakifbank	Turkey	$60billion
26	Attojariwafa Bank	Morocco	$57billion
27	AKBANK	Turkey	$55.4billion
28	Groupe Banque Populaire	Morocco	$42.6billion
29	First International Bank of Israel	Israel	$41.4billion
30	Investec South Africa	South Africa	$33.8billion

CASE STUDY ONE: HSBC

HSBC is one of the largest and recognised banks in the world with its global headquarters based in London. Its Middle East, North Africa and Turkey (MENAT) operations is based in Dubai. The HSBC MENAT office houses various services for its clients in the region.

The following are excerpts from an interview with Ghinwa Baradhi, the chief information officer at HSBC MENAT, in *Innovation and Digital Innovative Technologies*:

"HSBC's approach to financial technology innovations has been to partner with the fintech industry, helping to build a stronger ecosystem and provide superior products and services to customers. Strategic partnerships with fintech and enterprise startups are bringing significant customer and business benefits to HSBC globally, delivering insight into major innovation trends, early adoption of new technology or business models, and sound financial returns. We've been at the forefront of finding innovative solutions for our customers to create a bank fit for the future.

"In MENAT, we are actively involved in accelerator programmes, such as DIFC FinTech Hive, where we nurture and mentor groups of aspiring fintechs every year.

"While innovation isn't new to HSBC, the big change over the last few years has been the pace of innovation.

"Looking at the smartphone example – smartphones have brought customers closer than ever before to their service providers. So close in fact that customers no longer compare service providers against their direct competitors, they compare them all against each other – a customer expects to have the same experience when they do their banking as they have when they do their online shopping. That was new for banks and they've responded by providing personalised, interactive, instant services available at any time.

"More recently, the impact of Covid-19 has put an even greater focus on the importance of innovative digital banking solutions. A great example is our technology team taking the initiative to accelerate planned developments, such as incorporating digital signatures into customer journeys to provide contactless service, and launching our new online investment platform, providing real time access to book equity and ETF trades at the customer's convenience, along with robust insights to track progress on their wealth portfolio. Keeping our customers connected to their finances – whether savings and investments, or payments and international transfers – has ensured that funds have continued to flow despite lockdowns and economic dislocation worldwide."[102]

CASE STUDY TWO: STANDARD CHARTERED BANK

Standard Chartered is a leading international banking group, with a presence in 60 of the world's most dynamic markets and serving clients in a further 85. The bank's purpose is to drive commerce and prosperity through its unique diversity and its heritage and values are expressed in the bank's brand promise, 'Here for good'. Standard Chartered PLC is listed on the London and Hong Kong Stock Exchanges, as well as the Bombay and National Stock Exchanges in India.

The following are excerpts from an interview with Mohamed Abdel Razek, CIO for Africa Middle East & Islamic Banking at Standard Chartered Bank:

What has been the traditional Standard Chartered Bank response to financial technology innovations?

"We have embraced technology with open arms. From retail and mobile banking, to digital-only banks, technology has its hand in seemingly every aspect of the industry and, the quicker banks adapt and implement technology within their operations, the further ahead they'll be. In my opinion, the influence of technology will only increase and further launch banking into a digitised future.

"At Standard Chartered, we have championed a digital-forward approach for decades. We also vigorously monitor trends across our markets, in order to effectively address consumer demands. A great example of this is the launch of our digital banks across Africa, first launched in Côte d'Ivoire in 2018. Since then, we have rolled-out eight digital-only banks across key African markets, providing easily accessible and convenient banking services. This marked the most extensive digital rollout of its kind in Africa by an international bank.

"Moving ahead, we will continue to invest in technology to stay ahead of the curve and keep up with the rapidly evolving needs of our clients. We're committed to magnifying our position as a market leader in financial technology through the introduction of first-of-their-kind services and offerings across the markets we operate in."

What fintech ideas have been implemented in Standard Chartered UAE and across Middle East & Africa (MEA)?

"In addition to our digital-only banks which were rolled out, we also launched SC Keyboard across key African markets. SC Keyboard is a banking solution which allows customers to access a variety of financial services from within any social or messaging platform without having to open the banking app.

"Looking at the UAE, specifically, Standard Chartered rolled-out real-time onboarding, a first for the market. The solution allows new and existing customers to receive digitally delivered cards in as little as 10 minutes and was truly a game changer for the market. Similarly, we were among the first international banks in the UAE to launch major wallet solutions, including Apple Pay, Samsung Pay and Google Pay, giving customers the flexibility to complete mobile transactions faster, and through their wallet partner of their choice."[103]

Since its global introduction in 2017, open banking, the secure way to give providers access to your financial information via application programming interfaces (APIs), has changed the financial services industry completely, making it simple and easy for consumers to find new financial products. This has been particularly useful during the Covid-19 pandemic, with traditional bank branches having to close more and more people are looking to online and apps to cater to their financial needs.[98] Open banking has also begun to take root in the MEA region. Within MEA, Bahrain was an early adopter of open banking – the first in the region to pass open banking regulations and National Bank of Bahrain led the way in launching open banking services and open banking platform company, Tarabut Gateway.[99-100] To note, open banking compared to much of the world is still a relatively new concept but its importance noted.

The Saudi Central Bank (SAMA) announced its open banking policy to articulate the main objectives of implementing open banking in the Kingdom and its positive effects on the financial sector. The issuance of this policy builds on the efforts of SAMA in diligently pursuing the strategic objectives of the financial sector development programme, underscoring its commitment to promoting innovation, and trust within the sector, re-enforcing competition and raising efficiency.[101]

CASE STUDY THREE: EMIRATES NBD

Since the merger between Emirates Bank International (EBI) and the National Bank of Dubai (NBD) in 2007, Dubai-headquartered Emirates NBD has been a bank focusing heavily on innovation, fintech, online and mobile banking, being an experience-centric bank rather than a product-centric one. It is one of the largest banks in the Middle East in terms of assets and Emirates NBD's Liv. is the first lifestyle bank in the United Arab Emirates. The following are excerpts from an interview with Jayesh Patel, the head of Liv. by Emirates NBD:

What has been the traditional Emirates NBD response to financial technology innovations?

"While continuously keeping an eye out on what is the next big thing in the business of banking, Emirates NBD realised a few years ago the growth potential of challengers; hence the bank looked around and saw that consumers' lifestyle were increasingly interconnected with digital, but banks weren't responding to it. Being known as one of the better banks in the region to work with by customer satisfaction scores, Emirates NBD realised that this is exactly the position which could further enhance customer satisfaction. Today's

i. CASE STUDIES IN FOCUS: BANKS IN MEA ADOPTING FINTECH SOLUTIONS

The Fintech Times introduced an editorial series called *Behind The Idea*, speaking to C-Level people globally about fintech adoption across various sectors. In MEA and within the financial sector, these have included large global banks (HSBC and Standard Chartered Bank), MEA mainly focused large banks (Emirates NBD) and other regional within MEA focused (Bank ABC). All four in their own ways show the general adaptation of fintech within the banking industry.

customer banked with them, but would tomorrows? The answer was not clear, but not doing anything about it was not an option."

What fintech ideas have been implemented?

"There has been a few fintech ideas implemented, and more to come in the future for sure. Our digital account opening is instant and 100% paperless, using enhanced KYC with biometrics. We are working to further enhance the account opening process by exploring AI-based identity verification, making it more innovative and robust."

Speaking about liv: "The bank further conducted surveys and interviews to establish the daily patterns of millennials and how they bank. The most resounding takeaway was that these consumers wanted more lifestyle and less banking in their financial life. Millennials also tended to have a 'buddy' for things they need in life. They had a buddy to go out with, a buddy to shop, a buddy to go to the movies, and so on. Emirates NBD asked themselves: how can the bank be a buddy to the consumer? The answer to that question was to create a new digital-only lifestyle bank, Liv. After seeing the resounding success of Liv. in the past few years, Emirates NBD has recently launched a second digital-only bank, E20, which is focused more towards SMEs."[104]

CASE STUDY FOUR: BANK ABC

Bank ABC, incorporated as Arab Banking Corporation B.S.C, is an international bank headquartered in Manama, Bahrain and was founded in 1980. It has coverage across the Middle East, North Africa, Europe, the Americas and Asia and is a leading provider of trade finance, treasury, project and structured finance, syndications, corporate & institutional banking, as well as Islamic banking services. Bank ABC is also aiming to expand its retail banking in the MENA region.

The following are excerpts from an interview with Sael Al Waary, the deputy group CEO of Bank ABC and chairman of the advisory board of ila Bank.

What has been the traditional Bank ABC response to financial technology innovations?

"Bank ABC has always had a futuristic outlook when it comes to our banking and financial services. We embrace innovation at the highest level of the organisation, and we have long-recognised and advocated that the future is digital. We take an inside-out approach to the digitisation of services and the adoption of disruptive technologies; innovation and agility are at the heart of our corporate strategy and we have established ourselves as pioneers, anticipating the 'next big thing' and driving digital innovation in the financial services sector not only in Bahrain but across the region."

What fintech ideas have been implemented in Bank ABC or ila?

"We are modernising and investing in our existing platforms to drive operational efficiency and deliver more effective customer service. We believe that open banking is a key driver for delivering better value to our retail and corporate customers through the creation of customer facing ecosystems in partnership with leading fintech and big tech companies. At the centre of our digitisation strategy is a robust cloud-based API platform and adopting microservices architecture wherever beneficial to fuse our internal and external systems.

"The same API platform serves as our ecosystem integrator for utilising fintech services to enhance our banking products and services. We have also introduced the region's first API product owner and API scrum team as we recognise the value of APIs as critical enablers for business agility.

"Collaboration is key to embracing technology and we have also adopted many leading software as a service (SaaS) systems from AWS, Google, Microsoft, Salesforce, etc. From a retail banking perspective, we have introduced the region's first digital employee 'Fatema' – a digital DNA human who can read emotions and react through the use of AI natural language processing."[105]

b. Adoption of fintech solutions in the wider financial services ecosystem

Given the diversity of MEA and its various economic development trajectories, a clear unified response to fintech adoption is difficult to generalise. Nevertheless, much is needed and across the region various levels of adaptation have been shown. For instance, a 2019 study by S&P Global highlighted that within MEA fintech embracement will continue to slowly expand and therefore constitute a limited threat to the region's well-established financial institutions in the foreseeable future (this was in a pre-Covid world).

The creation of a propitious fintech ecosystem is still a work in progress in most regional countries and cities. The study highlighted that GCC countries will be the most prepared to adopt to fintech solutions. In addition, some Sub-Saharan African countries, such as Kenya, appear more advanced with its development of mobile banking solutions and payments. The same study highlights that the demand for those services looks to be more advanced in Sub-Saharan Africa than in North Africa, highlighting the lower use of the internet for financial services transactions.[106] Despite that, North African countries overall have better quality infrastructure and a higher abundance of human capital.

i. CASE STUDIES IN FOCUS: WIDER FINANCIAL SERVICES ECOSYSTEM

The Behind The Idea series by *The Fintech Times* also showcased various examples of fintech solutions beyond just the banks but as part of the wider fintech ecosystem. Again, speaking to C-level people they included examples, such as French headquartered Edenred with its UAE operations and Etisalat, a major telecommunications giant headquartered in the UAE, as well as Etisalat Digital's cybersecurity arm, Help AG. In addition, this report guide highlights the interview with the Tel Aviv Stock Exchange embracing fintech solutions as an example in MEA.

CASE STUDY ONE: EDENRED UAE

Edenred UAE is a fast-growing payroll service provider serving more than 6,000 companies, two million employees, more than 10 banks and 35 financial institutions. Operating out of Dubai since 2008, Edenred remains committed to empowering the company by simplifying payroll for businesses and improving the quality of life for employees with smart products. The following are excerpts from an interview with Anouar Bourakkadi Idrissi, CEO of Edenred UAE.

What has been the traditional response to financial technology innovations in your company?

"Typically, we are proactive in identifying the underlying problems payroll managers encounter, by building close relationships with our existing customers and their employees to understand their necessities and simultaneously serving both these segments with Edenred payroll platform, payroll cards and C3Pay mobile app.

Employers more than ever now are concerned about the pace of their salary processing to enhance their employee experience, but also the status of their fund transfer and managing their employees in one place especially from a remote environment. By focusing on improving the employee experience, the world's leading brands have discovered that there are positive knock-on effects: not just to traditional HR metrics like turnover and absentee rates, but also on customer experience and overall profitability.

We have successfully identified these trends in payroll manager's upcoming requirements as the economy revive, and are already noticing a drastic hike in demand for these functions from our customers. Our team here at Edenred UAE are gearing up to extend a refreshing experience to payroll by the beginning of 2021. With digital payments becoming a necessity in the economy for safer alternatives, we are expecting more early adopters to the updates we are pushing on our payroll platform and C3Pay mobile app."

What fintech ideas have been implemented in your company?

"We take up security on our payroll platform and C3Pay mobile app, as a critical extension to our product, all around the year. Migrating our datasets to cloud has significantly improved the payroll manager's platform experience in processing salaries quicker than ever with zero interruptions in service and 99.99 per cent uptime guarantee.

For mobile app users, this has reflected in the overall performance, but also with a new intuitive user interface which helps them access their financial information at a single tap. To respond to the crisis and the economic threats, we also enabled additional security layers to protect their salary, at all times, with a dedicated multi-language call centre to deliver personal support at scale.

We have also migrated our customer service from email to WhatsApp to enhance the customer experience by making it even more convenient and available 24/7 for our members to get in touch with us via a digital channel they are already highly familiar with and reducing the response time. Additionally, AI, chatbots and automated, self-service technologies were implemented to provide faster responses with accuracy."[107]

CASE STUDY TWO: HELP AG

Help AG, the cybersecurity arm of Etisalat Digital, provides leading enterprise businesses across the Middle East with strategic consultancy combined with tailored information security solutions and services that address their diverse requirements, enabling them to evolve securely with a competitive edge. Headquartered in the United Arab Emirates, Help AG has been present in the Middle East since 2004 and is firmly established as the region's trusted advisor. The following are excerpts from an interview with Nicolai Solling, chief technology officer at Help AG.

What has been the traditional Help AG response to financial technology innovations, in terms of securing these innovations?

"The financial sector has always been a major focus area for Help AG due to the risk-averse nature of financial organisations and the specific requirements they need to have fulfilled to ensure their security, especially in light of digital transformation. Help AG recognises the critical importance of securing the huge amounts of sensitive data that go into fintech as organisations in the financial sector face a higher risk of experiencing a cyberattack.

Traditionally, Help AG has offered services such as penetration testing, red teaming, endpoint security assessment, managed detection and response, etc. to protect fintech innovations. We have been an early advocator of email security and have focused on implementing application security and enabling a secure cloud journey for financial organisations looking into utilising public and private clouds and cloud compute technologies such as container-based services and micro-based services.

Help AG has also established strong partnerships with reputable vendors to offer valuable technologies that further boost the security posture of financial organisations, such as Palo Alto Networks' cloud security capabilities, F5's application firewalls, ShiftLeft's focus on securing the application code, and Aviatrix's solutions which emphasise creating a secure network fabric for your cloud environment whether it is on-prem or the public cloud.

By having rightly skilled talent and continuously broadening its capabilities, Help AG is able to articulate the value of these technologies and offer them within the market successfully. One of our major success cases within the financial industry is our involvement in the creation and implementation of Dubai Financial Services Authority's (DFSA) managed threat intelligence platform (TIP) which enables it to advise its members in a timely manner in case of a malicious activity."[108]

What fintech ideas have been implemented in Help AG?

"Help AG utilises digital transformation capabilities not only for its customers but also for its business, using private and public cloud while aiming to limit the footprint of its on-prem data centre by migrating services into the cloud and implementing the right security controls to ensure their safety. Moreover, Help AG's pen testing team is constantly assessing fintech and e-commerce applications to ensure organisations stay safe."

CASE STUDY THREE: TEL AVIV STOCK EXCHANGE (TASE)

The Tel Aviv Stock Exchange (TASE) is Israel's only public stock exchange in Israel. TASE plays a central role in the Israeli economy and provides a market infrastructure that is central to the economy's growth. As part of its strategic plan, TASE embraced fintech and innovation and is offering more digital and innovative products and services to companies and capital market players. The following are excerpts of an interview with Netanel Oded, head of business development, ASE:

What has been the traditional TASE response to financial technology innovations?

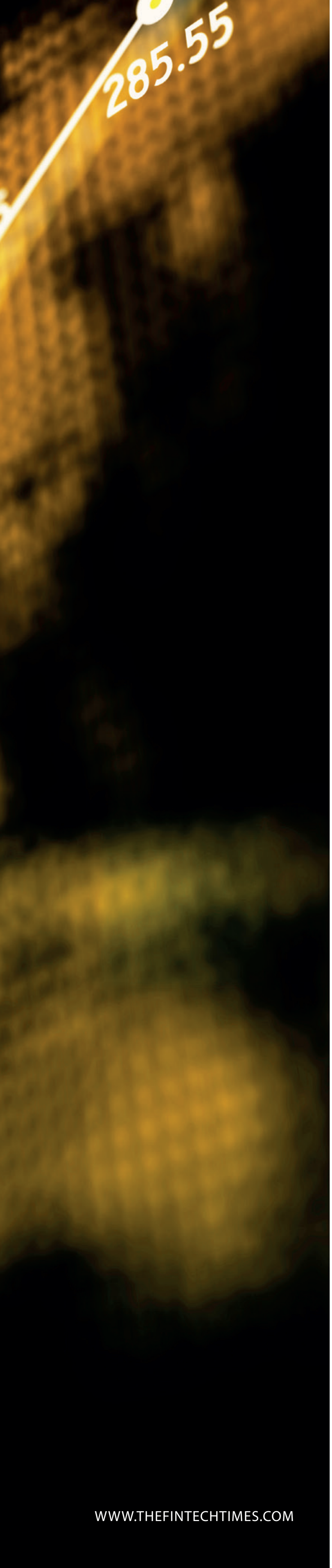
"TASE has always prided itself, like many financial institutions on reliability and continuity. It was basically 100 per cent focused on operational excellence, providing high end support to listed companies and investors. In that prism, the trading business did not seem to have a relevant space for innovation, and thus a lot of the fintech activity has been overlooked."

What fintech ideas have been implemented in TASE?

"We have for years pondered about the opportunity in the securities lending business. It is currently handled in Israel, as in many developed markets, as a bespoke business with high barriers to entry and high prices. We decided to disrupt the market and develop a central securities lending platform, based on blockchain technology. This is first-of-a-kind lending pool, a safe, cutting-edge and state of the art platform. The Blockchain technologypresents a new level of safety for securities lending and will support growth for transactions based on this new platform, which launched on 2 November 2020.

Another example is on the data side. We recently rolled out a new platform – TASE Data Hub, that revolutionises our data offering. It allows all market participants to automatically and directly connect to our databases and data feeds through a simple API system.

The groundbreaking product of the system is Smart Money, which offers exposure to daily and historical data of the composition of the monetary turnover in securities, showing the total aggregate monetary transactions by institutional investors and mutual funds in all securities that are listed on TASE."[109]



c. Islamic finance in focus

With an estimated 1.9 billion Muslims, according to World Population Review, Islamic finance has a large global reach. It is one of the fastest growing financial industries, even though it is still a small share of global finance, with total assets exceeding $2trillion and expected to reach $3.8trillion by 2023.

Figures from the Union of Arab Banks shows that 10 countries accounted for 95 per cent of the world's Sharia-compliant assets with Iran at 30 per cent of the global total, followed by Saudi Arabia at 24 per cent, Malaysia at 11 per cent, the United Arab Emirates (UAE) at 10 per cent, Qatar at six per cent, Kuwait at five per cent, Bahrain at four per cent, Bangladesh at 1.8 per cent, Indonesia at 1.6 per cent and Pakistan at one per cent.

The Middle East, Africa and South Asia (MEASA) region continues to be an important player in the industry. Sharia-compliant assets represent 14 per cent of total banking assets here and 25 per cent of banking assets in the Gulf Cooperation Council, which suggests that Islamic banking continues to be systemically important in these countries. Many cities in the region, including Riyadh, Abu Dhabi, Manama, Kuwait City, Doha, Jeddah and Muscat, are growing their reputations as Islamic financial hubs.

There are more than 80 Islamic financial institutions in Africa with the majority in northern Africa, particularly in Sudan. Other countries, such as Nigeria, Senegal and Kenya, have implemented banking, legal and regulatory frameworks to be Sharia compliant. Established banks have also set up Islamic departments where they provide Sharia-compliant products, including Absa Bank of South Africa, Ecobank Chad and Sterling Bank Plc of Nigeria. Islamic banking assets are set to increase 10 per cent over the next five years in total African banking assets, according to credit rating firm Moody's.[110] Other recent highlights for Islamic finance in MEA:

- ZamZam Bank from Ethiopia obtained a licence from the country's banking regulator to carry out Islamic banking activities in the country – becoming the first officially recognised institution to specifically offer financial services and products that comply with Islamic law
- The Central Bank of the UAE (CBUAE) signed a memorandum of understanding with the Dubai Islamic Economy Development Centre (DIEDC) by reinforcing and expanding the Islamic banking sector reach, as well as advancing cooperation in areas of mutual interest
- Tezos Gulf was established to foster ecosystem development in the Gulf Cooperation Council for the Tezos network, an open-source public blockchain for assets and applications. Tezos Gulf has also announced the assignment of Shariyah Review Bureau (SRB) as its Sharia advisor[111]
- Supply@ME, a fintech platform that provides a unique inventory monetisation service to European manufacturing and trading companies, is authorised to offer a Shariah-compliant platform to companies in MENA[112]
- According to the Global Islamic Finance Report, Bahrain ranks first in the MENA region and second globally in terms of Islamic finance regulation thanks to its standards on crowdfunding and open banking[113]

ISLAMIC FINTECHS

COUNTRY	NUMBER OF FINTECHS
1 UK	28
2 Malaysia	18
3 UAE	15
4 Indonesia	13
5 Saudi Arabia	9
6 USA	9
7 Rest of the world	53

Source: *IFN Fintech*[114]

There are 145 fintechs from 29 countries, according to IFN Fintech.

The Covid-19 pandemic has accelerated the development of Islamic fintech innovations. For example, Abu Dhabi Islamic Bank (ADIB) saw a substantial rise in customer demand for its digital banking services last year. Even after the phased re-opening of the UAE economy, ADIB has continued to see strong uptake for digital services, with 75 per cent of customers now enrolled through the bank's digital channels.[115]

2. The insurance industry in focus

Insurance offerings in the MEA region are vast, with options for consumer and business spanning property, health, life and non-life insurances, as well as a host of other financial services, including pensions and asset management.

Below is a chart of the top 15 insurance companies in the MEA region, ranked by total assets in US dollars, with information gathered from websites and annual reports. Interestingly, entries are evenly distributed between four countries: Turkey, Israel, South Africa and Morocco, with Turkey's ERGO Sigorta taking the top spot with $110.9billion total assets and Israel's Harel Insurance Investments & Finance Services and Migdal Holdings ranking second and third respectively.

The global digital transformation of insurance has seen insurtech grow in importance. Given the diversity of MEA, and its various economic development levels, adoptions and advancements of insurtech varies. Similarly, regions mainly in the GCC and Israel are more advanced than other MEA counterparts.

According to research from data platform MAGNiTT, $26million was ploughed into MENA-based insurtech startups in 2019 – the highest amount in any year in recorded history. The insurance premiums market in MENA stood at $57billion in 2018, providing a large addressable market for insurtech startups, according to Atlas. From Zawya, most low-income migrant workers were not insured at 79 per cent. The same research by MAGNiTT also highlighted that the top five funded insurtech companies were all based in the UAE.[117]

Therefore, in the Middle East, the success of the UAE presents more opportunities for insurance and insurtech to grow. Even within the UAE, where the majority of low-income workers are not insured, potential insurtech solutions could help close those gaps.

Africa is generally less developed than more advanced economies and this is reflected in the insurance industry where penetration is some of the world's lowest, according to a report from Deloitte. For example, despite much activity in fintech in Nigeria, the country's insurance penetration is a lowly 0.4 per cent. Indeed, for much of Africa generally, a combination of factors – from the low income of customers to the large unbanked sector – has resulted in relatively low insurance levels.[118]

A report from management consulting firm McKinsey suggests that the African insurance market is valued at around $68billion in terms of gross written premiums, which would put it at the eighth largest in the world. However, this is not consistent throughout the continent and is heavily concentrated in one country – South Africa.[119]

HIGHLIGHT: ISRAEL AND INSURTECH

The insurtech ecosystem in Israel is growing rapidly, with around 100 companies in this field. The following is an excerpt from an interview with Dikla Wagner, head of tech scouting for Munich Re in Israel – one of the world's largest reinsurance companies. The 140-year-old business, with a turnover of more than €33billion from the reinsurance business alone, was also named one of the pillars of the German economy.

Here, Wagner discusses Israel's insurtech scene: "Israel is home to the world's leading insurtech companies and has seen mega-investment rounds, such as Lemonade, which raised $350million from SoftBank; Next Insurance with $250million led by Munich Re and another $250million round led by CapitalG with participation from Munich Re. And, then there was Hippo that raised $150million. We believe that this list will grow thanks to the talents and the real hunger that Israeli entrepreneurs have. We also believe that Israeli startups will become more sophisticated with their solutions, leveraging tech capabilities and advantages in their business use cases. For many years, the greatest challenge for Israeli startups was to scale outside of Israel, but the leader of the market has proven us wrong."[116]

HIGHLIGHT: SOUTH AFRICA

South Africa has one of the world's highest penetration rates of insurance, accounting for 80 per cent of the continent's total gross premiums.[120] In Sub-Saharan Africa, South Africa, where its penetration represented 13.8 per cent of gross domestic product in 2017, was followed in second by Namibia at 7.6 per cent of GDP while Kenya ranked third at 2.6 per cent of GDP the same year.[121]

Yet, despite the high penetration in South Africa, it is still pretty much uninsured. For instance, if we look at individual product penetration, such as auto insurance, only 35 per cent of cars are covered. This is where fintech innovations have been able to help. Not unique to South Africa but insurtech solutions can help customers directly by price comparing various products that otherwise would have been difficult to do.[122]

THE TOP 15 INSURANCE COMPANIES IN THE MENA REGION			
Rank	Insurance company	Country	Total assets in USD
1	ERGO Sigorta A.Ş	Turkey	$110.9billion
2	Harel Insurance Investments & Finance Services	Israel	$82.7billion
3	Migdal Holdings	Israel	$74.8billion
4	Old Mutual	South Africa	$51.8billion
5	Liberty Holdings	South Africa	$41.9billion
6	Clal Insurance Enterprises Holdings Ltd	Israel	$34.6billion
7	Momentum Metropolitan Life Assurers	South Africa	$28.6billion
8	Insurance Association of Turkey	Turkey	$24.6billion
9	Menora Mivtachim	Israel	$11.7billion
10	Discovery Health	South Africa	$11billion
11	Qatar Insurance Company	Qatar	$10.8billion
12	RMA	Morocco	$4.8billion
13=	Anadolu Hayat Emeklilik	Turkey	$3.7billion
13=	Wafa Assurance	Morocco	$3.7billion
15	Tawuniya	Saudi Arabia	$3.6billion

Given the relatively small penetration of insurance, insurtech solutions cannot be adapted, but present future opportunities for innovation to help close those gaps as well. The same Deloitte study highlights that the introduction of mobile money payments systems has seen growth and innovation within insurance as well. In Rwanda, Kenya, Tanzania and Ghana (with high penetration rates of mobile money accounts), there is strong gross premium growth. From 2007 to 2016, gross premiums in Africa had grown almost twice as fast as the region's GDP.[123]

Despite successes, such as in Israel and the GCC, MEA still has the potential opportunity to further digitalise and adopt insurtech from traditional companies as well as disruptors in the sector.

3. Other sectors

It is not just the financial services and insurance sector that has adopted fintech solutions. Across much of the daily lives of those in MEA, the 'embracement of fintech' can be felt across a wide range of other sectors and day-to-day interactions. This section looks at e-commerce and tech for adoption and growth of fintech.

A E-COMMERCE

MEA has been slower to adapt to the rise in e-commerce compared to other parts of the world. For instance, in the Gulf, the shopping mall represents something beyond just a shopping destination. As temperatures in the summer can swell to as high as 50^C and beyond, the shopping mall represents a destination for families, residents and tourists. The most famous one, Dubai Mall, offers visitors not only shopping but dining, entertainment and even a clinic. In addition, the traditional market across MEA also represents opportunities and habits that have been around for centuries. E-commerce just hasn't been able to completely fully convert yet.

However, the past few years have seen a growth in e-commerce and the Covid-19 pandemic has driven that appetite – not only in MEA but across the rest of the world. According to research from consultants McKinsey in 2020, consumers across the GCC, South Africa and Turkey have shopped online more during the pandemic than ever

73 per cent of consumers in MEA shopped more online than they did before the pandemic

before – showing higher demand for groceries, personal care and household supplies. Saudi Arabia and the UAE showed some of the highest rates of 'new or increased' users with online deliveries (restaurant products and groceries) and communications (video conferencing and remote learning).[124]

As demonstrated previously in a report by Checkout.com, the growth of e-commerce shows that it will appear to hit that trajectory both now and in a post-Covid-19 world.

The Mastercard Economics Institute's recent Economy 2021 global outlook report also showcased permanent changes in digital consumer spending habits, growth of online banking, fintech disruption and opportunities to boost financial inclusion. The Institute estimates a permanent stickiness factor of 20 to 30 per cent in overall retail spending with respect to e-commerce spending surge. A previous Mastercard study also showed that 73 per cent of consumers in MEA shopped more online than they did before the pandemic.

The report also notes that continued digitalisation in MEA is key to advancing financial inclusion. This is especially relevant in regions such as East Africa. Meanwhile, International Monetary Fund research found that although financial inclusion through traditional banking services was on the decline, expanded access to digital tools and services nonetheless increased financial inclusion. It is expected that this trend will continue this year, especially in the more digitally advanced economies of Kenya, Ghana and Uganda. In addition, the move away from cash will be led by more developed MEA economies, such as the UAE.[125]

B: Tech sector as a whole

As highlighted in the report, digital transformation and wider tech has been a priority across much of MEA. Government strategies have made it a key aim to boost and grow the wider high knowledge-skilled economy, which fintech as part of the wider tech ecosystem plays a strong part in.

In terms of tech, according to GlobalData's deals database, MEA's technology industry in Q2 2020 saw a rise of 14.9 per cent in overall deal activity when compared to the fourth quarter average. In context, a total of 177 deals that were worth nearly $3billion were announced in MEA during Q2 2020. Within that, venture financing saw the most activity with 75.7 per cent followed by mergers and acquisitions (M&As) with 21.5 per cent and 38 deals and private equity deals in third place with a 2.8 per cent share. With regards to value, it was M&A with the largest share at nearly $2billion followed by venture financing at shy of $1billion ($925.5million) and private equity at $27.96million.[126]

MEA's technology industry in Q2 2020 saw a rise of 14.9 per cent in overall deal activity when compared to the fourth quarter average

It is worth noting that MEA has produced quite a few unicorns although its proportion is relatively small in comparison to the world's share. In addition, the tech scene with respect to unicorns is concentrated in the Middle East, especially Israel and the UAE. At present, the UAE is home to only one unicorn – Emerging Markets Property Group (EMPG), funded by OLX Group, KCK Group and Exor Seeds – while Israel has seven.[127]

In Africa, there were only three unicorns in 2018, according to a report by analytics firm CB Insights – Nigeria's Jumia and South Africa's Promasidor Holdings and Cell C.[128] Compared to much of the rest of the world, MEA showcases a strong concentration within key regions such as in Israel and the UAE for the Middle East and Nigeria, Egypt, Kenya and South Africa in Africa. Nonetheless, the scale compared to the rest of the world at present is less. In addition, compared to more established tech communities, such as Silicon Valley in the US or London in the UK, MEA still has much to develop in its ecosystem – from funding to wider tech support to other innovations.

HIGHLIGHT: TUNISIA

Tunisia was the first country in the African continent to pass a startup law that overall promoted its wider startup sector. Passed in April 2018, it was so groundbreaking that countries, such as Senegal and Kenya followed suit.[129-130]

However, the successes of the MEA tech scene should be praised and plays a role in its wider economic development diversification across various economies. On a final note, Israel, known as a 'startup nation', was recently ranked as the third-best tech ecosystem in the world behind only the US and the UK, according to ecosystem ranking platform StartupBlink.[131] The same report also highlighted that in the Middle East, only four cities were in the top 100: Tel Aviv (7), Jerusalem (55), Istanbul (80) and Dubai (99). Shy of the top 100 were Nairobi at 116 and Lagos at 127.[132]

As highlighted in the StartupBlink report and in previous comments, there remains gaps in MEA, minus Israel and the UAE and Turkey, with plenty of opportunities for their tech ecosystems to grow.

HIGHLIGHTS OF THE TOP 100 OF MEA COUNTRIES FROM THE 2020 STARTUPBLINK REPORT:

Israel	3rd
UAE	43rd
Turkey	49th
Kenya	62nd
Rwanda	65th
Jordan	67th
Nigeria	68th
Lebanon	74th
Bahrain	75th
Tunisia	77th
Egypt	81st
Morocco	83rd
Qatar	84th
Ghana	85th
Saudi Arabia	88th
Uganda	89th
Iran	90th
Cape Verde	91st
Kuwait	92nd
Somalia	95th

Source: *StartupBlink 2020* report

5. The regulatory landscape of fintech in MEA and other subsectors overview

The MEA region has different levels of regulatory aspects that pertain to fintech specifically. But much of these regulations are still in their infancy and/or lacking. This is in parallel to those with no strategy nor wider economic development reforms that prioritise economic diversification.

In the Middle East, there have been strong developments pertaining to regulations, particularly in the GCC. In Africa, regulations in fintech still lags and is still in its infancy.

Financial services: A glimpse

As highlighted in the financial services sector section, MEA generally has regulations in this sector. This includes the more advanced economies of the GCC, as well as countries in Africa which generally only began major reforms and regulations in the 1980s.

In most cases, as seen in the table below, the financial services industry is regulated by the individual country's central bank or monetary authority. Occasionally there are other authorities that have power over the industry, as seen in UAE and Kenya, or other agencies to deal with specific factors of finance, as in Israel. The following gives a glimpse at some of those bodies in a selection of MEA countries:

FINANCIAL SERVICES IN THE MENA REGION

Country	Regulator
UAE	UAE Central Bank
UAE	UAE Securities & Commodities Authority
UAE	UAE Insurance Authority
Saudi Arabia	Capital Market Authority
Saudi Arabia	Saudi Arabian Monetary Agency
Bahrain	Central Bank of Bahrain
Israel	Ministry of Finance
Israel	Bank of Israel
Israel	Ministry of Justice
Israel	Israel Securities Authority
Turkey	Banking Regulation & Supervision Agency
Turkey	Central Bank of Turkey
Egypt	Central Bank of Egypt
Morocco	Central Bank of Morocco
Nigeria	Central Bank of Nigeria
Nigeria	Nigerian Communications Commission
Nigeria	The Nigerian Deposit Insurance Corporation
South Africa	South African Reserve Bank
South Africa	Financial Sector Conduct Authority
South Africa	National Credit regulator
Kenya	Central Bank of Kenya
Kenya	Capital Markets Authority
Kenya	Communications Authority of Kenya

Fintech specific

Fintech has been an emerging and fast-paced global phenomenon that has resulted in many governments having to act fast to promote, embrace and regulate the sector.

In much of the Middle East, particularly in the GCC, Egypt and Israel, fintech generally has regulations per their respective countries. Much of it, of course, are implementation results of their wider economic development and diversification strategies that prioritises digital transformation and promotes technologies, such as fintech, to thrive and grow.

However, as the GCC is not as strong as say the European Union, the regulations of fintech are not applicable across its member states. For instance, a company looking to expand beyond one GCC country into another would still need to apply for a licence to operate and that takes both time and money – difficult for startup companies due to cash flow and time.[133]

Turning to Africa and fintech is still in its infancy in terms of regulations. However, headlines this year show countries, such as South Africa, Angola and Ghana, have made advancements in various aspects of regulations and/or promoting the sector.

Egypt also passed its banking law that had guidelines about fintech. In addition, the African Continental Free Trade Agreement (AfCFTA) launched this year. Again, as that is only a free trade agreement it showcases (as does the GCC) potential future opportunities for more harmonised fintech regulations to promote trade and investment.[134]

Regtech

Globally, after the 2008 financial crisis there was a surge in financial sector regulation. Eager for the economy to recover and to ensure it never hit rock bottom again, regulators put new rules in place to improve risk management and safety in the industry. These rules, regulations and requirements are changing constantly with banks and financial institutions under continuous pressure to keep up.

Between 2008 and 2016 there was a 500 per cent increase in regulatory changes in developed markets. Not only is the regulatory landscape moving rapidly but fines for non-compliance are costly and constant, and an issue companies will want to avoid. Global financial institutions have been fined more than $36billion since 2008, with about $10billion of those non-compliance fines awarded in 2019 alone.

This is where regtech comes in, as its products and services facilitate the compliance of businesses to these various regulatory requirements. Rising to prominence in around 2015 when the actual term regtech was created by the Financial Conduct Authority, regtech has a particular emphasis in regulatory monitoring, reporting and compliance - all facilitated through technological advancements. These tech companies often use cloud technology through software-as-a-service (SaaS), as well as utilising big data for reporting.

Generally speaking, regulations for financial institutions fall into one of four categories:

- **Regulatory:** data distribution and regulatory reporting through big data analytics and real-time reporting
- **Identity management:** revolving around know-your-customer (KYC), customer due diligence (CDD) and anti-money laundering (AML) requirements
- **Compliance:** real-time monitoring of compliance and any upcoming regulation
- **Risk management:** detecting risks in compliance and anticipating any future issues[135]

Although MEA is still in the early stages in regtech, its presence and importance has been growing. In the UAE, Abu Dhabi's international financial centre – Abu Dhabi Global Market (ADGM) – launched an electronic know-your-customer (e-KYC) utility project in 2018. It was launched in collaboration with major UAE financial institutions, such as Abu Dhabi Commercial Bank (ADCB), Abu Dhabi Islamic Bank, Al Ansari Exchange, Al Fardan Exchange, First Abu Dhabi Bank and UAE Exchange.

Through collaboration, a proof-of-concept to decide the governance framework and the functional requirements of the e-KYC utility, with distributed ledger technologies being considered to underpin core functionality within the platform, was aimed.[136] It was also announced this year that it would enact the Data Protection Regulations 2021. Replacing the current Data Protection Regulations 2015, the initiative follows a period of public consultation. The data protection framework is designed to protect personal data, while also remaining balanced and business friendly.[137]

Over in neighbouring Dubai, the city's international financial centre, Dubai International Financial Centre (DIFC) and Dubai Financial Services Authority (DFSA) launched the Cyber Threat Intelligence Platform (DFSA TIP) last year. It is the first regulator-led platform of its kind in the region and has created an information sharing system for firms in DIFC through public-private partnerships. Since its launch, more than 130 organisations have registered to use the platform and 1.6 million attributes for 56,806 cyber threats are now posted to it.[138]

Globally, after the 2008 financial crisis there was a surge in financial sector regulation. Eager for the economy to recover and to ensure it never hit rock bottom again, regulators put new rules in place to improve risk management and safety in the industry

4. The rise of regulatory sandbox

A regulatory sandbox can broadly be described as a unit that typically sits within a country's conduct regulator and evaluates the need for fintechs to conduct controlled market tests under less stringent regulatory requirements. The solution borrows inspiration from the pharmaceutical industry and the tiered process for testing new drugs. Regulatory sandboxes sit on the border between an ecosystem approach and infrastructural change in regulatory innovation.

On the one hand, regulatory sandboxes allow regulators to engage entrepreneurs more quickly and at a lower compliance cost, than in a controlled setting. On the other hand, they constitute a process/infrastructural change on the path towards reforming the authorisation procedure. On the global stage, such as in the UK and Singapore, sandboxes are often referred to as examples of leading and advanced regulatory architecture.[139]

As regulatory sandboxes play a large part in an ecosystem's advancement and embracing of fintech innovation to thrive, it is a strong indicator in the wider regulatory environment to allow for fintech to develop. With respect to MEA, it is a developing trend but slowly catching up with the more advanced fintech economies. For instance, Abu Dhabi Global Market announced in November 2016 the first regulatory sandbox in the MENA region, ADGM RegLab. The following year, both Dubai Financial Services Authority and the Central Bank of Bahrain (CBB) created their own regulatory sandboxes.[140] The ladder was MENA's first onshore sandboxes as both are free zones, where the CBB's has 32 innovative fintechs from all over the world testing their technologies today.[141]

A sample of countries in MEA (as shown below) either have a regulatory sandbox in place or have one in development. The report will further analyse other developments in the regulatory sandbox aspect in other known fintech hubs in MEA.

Cybersecurity

The Middle East and Africa region has a growing cybersecurity market, which has undergone its own digital transformation across the vast region of more than 1.7 billion people. As highlighted earlier in the regtech section, MEA has potential to further grow its wider regtech space and cybersecurity plays a role in that.

Various reports and research support this outlook. Market research firm Mordor Intelligence says the cybersecurity market in MEA was valued at $7.174billion in 2019 and was predicted to register a compound annual growth rate (CAGR) of 14.08 per cent during 2020 to 2025.

EXAMPLES OF A SAMPLE ECONOMY IN MEA AND REGULATORY SANDBOX JOURNEYS

Country	Do they have a regulatory sandbox?	Information
UAE	Yes	FSRA launched the RegLab sandbox, the first in the region and the world's second most active fintech sandbox. Designed to foster innovation within UAE fintech market
Saudi Arabia	Yes	Launched as part of the 2030 financial sector development programme by The Saudi Arabian Monetary Authority
Bahrain	Yes	The Central Bank of Bahrain launched its regulator sandbox in 2017 and is open to new and existing fintech companies
Israel	In development	The arrangements law that will be presented to the cabinet will include rules for a regulator sandbox, after claims the lack of an Israeli system has 'handicapped' fintech startups in Israel
Turkey	In development	As part of the Turkish Digital Strategy 2023 it plans to implement a regulatory sandbox within 'national blockchain infrastructure'
Egypt	Yes	The framework was published in 2019 by Central Bank of Egypt companies are able to apply for
Morocco	No	
Nigeria	In development	Exposure draft for regulatory sandbox released in June 2020 by The Central Bank of Nigeria. There may be three sandboxes by 2023
South Africa	Yes	Intergovernmental Fintech Working Group went live with an innovation hub in 2020 with a regulatory sandbox to support and promote innovation
Kenya	Yes	Capital Markets Authorities regulator sandbox admitted its first 3 entities in August 2019

Another report from ResearchAndMarkets.com suggests the same. For its pre Covid-19 forecast, the Middle East cybersecurity market is projected to grow from $16.1billion in 2020 to $28.7billion by 2025 with a CAGR of 12.2 per cent. Interestingly, its post Covid-19 forecast increased that, where its CAGR rate looks to be at 13.8 per cent with a 2020 figure of $15.6billion to a 2025 forecast of $29.9billion.

There are various reasons why cybersecurity plays a large role in the MEA region but at the end it is generally the region's rise in digital transformation in a short period of time. At top level, much of the region has been undergoing various economic development strategies as highlighted prominently in this report. As much of the wider economic development diversification has prioritised digital transformation, countries, such as the UAE, have become leaders in digital transformation.

In other parts of MEA, such as in Africa, digital transformation either has come as part of its large national economic strategies, e.g Egypt, as well as other governmental support initiatives – whether they include being part of an economic development strategy or not. In the fintech space, highlights in Africa were felt across much of the continent – from Nigeria to South Africa to Angola to Ghana to Kenya – to name a few. They included announcements from planned fintech strategies to fintech offices for instance.

HIGHLIGHT: ISRAEL AND CYBERSECURITY

Israel has led the way globally in cybersecurity. Israeli startups received $1.19billion (almost 20 per cent) of global VC investments in cybersecurity, according to a report called *Israel's Cybersecurity Industry from Startup Nation Central*. The same report highlighted that there are around 450 cybersecurity companies operate in Israel. The country has had an industry since the 1980s, where companies began developing anti-virus software and information security.

They have been at the forefront for much of wider tech innovations and particularly in cyber, such as the Israeli Ministry of Finance's Fintech-Cyber Innovation Lab Programme, the first initiative in the world that leverages governmental assets and data to promote fintech and cyber startups in an open innovation platform. Examples of Israeli cyber companies include Imperva, Check Point, Radware and CyberArk – to name a few. The country, with its tech scene and history of cyberattacks, coupled with other factors such as promoting the sector and educating the youth on tech in general, shows much of the innovation its cyber industry has produced on a global stage.

Turkey is now ranked 20th on the Global Cybersecurity Index as a result of the country's efforts to strengthen its sovereignty in the cyber domain, kickstarted by the country's Vice President, Fuat Oktay.

Even before Covid-19, fintech was playing a large role and during the pandemic and beyond most likely will continue to do so. This includes the likes of contactless payments and other mechanisms where consumers and companies are providing sensitive data, which exposes people to potential cyberattacks. For instance, the growth of online shopping and other online and digital activities can expose people to more potential challenges.

Israel has led the way globally in cybersecurity. Israeli startups received $1.19billion (almost 20 per cent) of global VC investments in cybersecurity

The Morder Intelligence report highlighted examples, such as Smartworld – which stands to be the first cybersecurity centre to provide continuous monitoring of online threats and cyber threat management to companies across the region's government and private sectors. Tata Communications has unveiled an advanced cybersecurity response centre in Dubai, for example.

In terms of Africa, the growth of non-cash volume due to the continent's young population will grow the demand for cybersecurity. The same report says: "This factor is expected to drive the new mobile money and digital payment schemes, with Kenya emerging as the regional leader in the implementation and uptake of mobile payment solutions, such as M-Pesa. Augmenting this trend, ABK Egypt, with 39 branches and 85 ATMs across the country, has employed Cisco's cybersecurity solution to stay at par with the country's digital transformation."

Despite research showing an overall decrease in certain malware families and types in Sub-Saharan Africa in H1 2020 (36 per cent decrease in South Africa, 26 per cent decrease in Kenya and a 2.7 per cent decrease in Nigeria), Kaspersky research has warned that the human cyber threat remains rife. Africa is not immune to the evolving techniques of advanced persistent threats (APTs), as well as the possibilities of being a future target of hacking-for-hire threat actor groups.

In the Middle East, in particular the GCC, both before and during Covid, banks have accelerated their digital transformation and cybersecurity to protect their customers' accounts and investments. Finally, beyond just fintech but in our day to day lives, the demand for cybersecurity in the region has gained traction in the water systems and pumping stations due to automation, where the threat of cyberattacks has increased in the region.

Artificial intelligence

Various countries in the region have placed an emphasis on artificial intelligence (AI). It is not just nationwide economic development diversification strategies, such as Vision 2030, but also, complementing and in parallel, strategies purely around AI. For example, the UAE has its Artificial Intelligence Strategy 2031 – a commitment to 'smart', advocating application and adoption of exponential technologies (such as AI) to transform business, government and society. Beyond the GCC, but within the Middle East region, examples of prioritisation in AI include countries like Egypt and Israel. Firstly, in Egypt, the government is looking to develop AI capabilities in several ways, including launching an AI faculty at Kafr El Sheikh University. Egypt is aiming to have 7.7 per cent of its GDP, or almost $43billion, derived through AI by 2030.

In Israel last year, 42 per cent of the total sum invested in high-tech went towards AI technologies. Despite Israel's strong tech

HIGHLIGHT: UNITED ARAB EMIRATES

Its commitment to wider digital transformation is pretty clear, as it ranks the highest in the Arab World (and 12th globally) in digital competitiveness, according to IMD's *World Digital Competitiveness Ranking 2019 Report*.[142] It was also the first country in the world to have a State Ministry of AI. Dubai, for instance, from 2015 to 2018, attracted a total of $21.6billion in foreign direct investments (FDI) for artificial intelligence and robotics – said to be the highest in the world. Much of the investments came from the European Union (EU) and the United States, accounting for $5.7billion and $3.9billion.[143] Abu Dhabi's Mubadal also announced that it will become an investor in Group42 (G42), an artificial intelligence and cloud computing company, via the integration of Injazat and Khazna Data Centres (Khazna).

HIGHLIGHT: SAUDI ARABIA

Saudi Arabia at its recent Global AI Summit in October last year revealed its new National Strategy for Data & AI (NSDAI); by 2030 Saudi Arabia's vision is to become the place where the best of data and AI is made reality. Under the strategy, Saudi Arabia will implement a multi-phase, multi-faceted plan that includes skills, policy and regulation, investment, research and innovation, as well as ecosystem development. AI can contribute an estimated $135billion to its GDP, which corresponds to 12.4 per cent of the national GDP.

and AI sector, the country has yet to adopt a national AI strategy, which many in the tech community have flagged. Last year, a report by the government's Innovation Authority urged authorities to adopt a national strategy to include boosting Israel's data science engineers, supercomputing infrastructure, as well as allocate more public money to R&D.

Other countries, such as Turkey, are also preparing to launch their own national AI strategies. Turkey, given its large population and economy, has had an active AI scene. In fact, an AI MEA report commissioned by Microsoft and conducted by EY, revealed Turkey, based on the relative spend on AI transactions in MEA from 2008-2018, secured the top spot of $3.49billion with 252 deals (beating second place the UAE at $2.15billion with 160 deals).

On a final note, with the current Covid-19 pandemic, AI has been important across various aspects of our lives. This has been aided of

> By 2030, Saudi Arabia's vision is to become the place where the best of data and AI is made reality. Under the strategy, Saudi Arabia will implement a multi-phase, multi-faceted plan that includes skills, policy and regulation, investment, research and innovation, as well as ecosystem development

COUNTRIES IN MEA WITHIN THE TOP 100 LIST

Country	Rank
United Arab Emirates	21
Israel	30
Bahrain	38
Saudi Arabia	43
Kuwait	46
Oman	50
Turkey	53
Mauritius	63
Qatar	66
Seychelles	76

Source: *UN Department of Economic and Social Affairs E-Government Survey 2020* report

course by fintech, but AI has played roles in keeping the global population safe and healthy as a whole. From thermal cameras in large shopping malls to contact tracing and other streamlined services, such as with payments.[144]

Crytocurrency, blockchain and digital transformation

Much of MEA has various levels of embracing cryptocurrency and blockchain, particularly with the rise of Bitcoin and wider digital transformation in both a pre and pandemic Covid-19 world.

VARIOUS LEVELS OF EARLY AND MORE DEVELOPED STAGES OF ADOPTION OF DIGITAL

The GCC, and much of wider MEA, have been undergoing their various economic development transformations and digital transformations.[145] According to the Middle East Institute, blockchain is expected to grow in the next few years, particularly in GCC countries like the UAE, Bahrain and Saudi Arabia. Most of the current blockchain-based development projects that have been announced in GCC countries to date are in the preliminary concept or establishment stage. Only a few such projects in the Gulf have entered the experimentation and testing phase due to the newness of the technology and the fundamental changes it promises.[146]

From the recent United Nations' *Department of Economic and Social Affairs E-Government Survey 2020 Report*, countries in MEA within the top 100 list include all the GCC countries and a few other ones across MEA:

Ghana missed the top 100 ranking at 101st. The survey claims to be 'the only global report that assesses the e-government development status of all United Nations Member States. The assessment measures e-government performance of countries relative to one another, as opposed to being an absolute measurement.' The leaders overall were Denmark at number one, followed by South Korea at number two.[147]

Luno, a global cryptocurrency platform, has unveiled results from a global survey which show that nearly three out of five Nigerians are ready to adopt a global digital currency, reflecting the country's growing interest in cryptocurrencies since the start of the global pandemic. Nigerians also rank higher than the global average of 37 per cent for openness to digital currency adoption. With a population of 200 million people, Nigeria is MEA's largest country by population.

The survey, which included 15,000 respondents from South Africa, UK, France, Italy, Indonesia, Malaysia and Nigeria, was first conducted in 2019 and then repeated last year. It forms the basis of Luno's *Trust and Uncertainty in 2020 Report* which explores how the attitude towards governments, money and the decision-making by central banks has changed.

More than half (54 per cent) of Africans think a single global currency would make their financial system better according to the survey, compared to 41 per cent for Asia and 35 per cent for Europe. Across the survey, all respondents expressed an increased negative sentiment on the development of their local currency than the previous year. Forty per cent believe their local currency will decrease in value over the next year, while 31 per cent think it will stay the same and only 29 per cent see an increase going forward. Hence, the majority are anticipating a decrease in their local currency – leading many to explore alternatives.

For much of the Middle East, with its various levels of economic development, digital transformation is playing a large role with blockchain and cryptocurrencies forming a large part in that. The UAE government website states, for example, that: "The UAE Government adopted blockchain technology in conducting its transactions. To aid this move, it launched the Emirates Blockchain Strategy 2021 and Dubai Blockchain Strategy. The Emirates Blockchain Strategy 2021 aims to capitalise on the blockchain technology to transform 50 per cent of government transactions into the blockchain platform by 2021. The Dubai Blockchain Strategy will help Dubai to be the first city fully powered by Blockchain by 2020 and make Dubai the happiest city on earth. The strategy will be using three strategic pillars: government efficiency, industry creation, and international leadership."

> The GCC and much of wider MEA have been undergoing their various economic development transformations and digital transformations. According to the Middle East Institute, with regards to blockchain, it is expected to grow in the next few years, particularly in the GCC countries like the UAE, Bahrain and Saudi Arabia

Dubai Future Foundation established the Global Blockchain Council to explore and discuss current and future applications, and organise transactions through the Blockchain platform – according to the Dubai Multi Commodities Centre (DMCC) website.

One example of leading the way in crypto and digital in practice is IBMC Financial Professionals Group, an internationally recognised financial services institution and business consultancy, who joined forces with US Gold Currency Inc and Blockfills to bring the world's first monetary gold-backed digital gold currency to MEA and India.

Furthermore, the Saudi Central Bank (SAMA) and the Central Bank of the United Arab Emirates (CBUAE) have announced the results of their 'Aber' Project. This was created by the central banks of both countries to explore domestic and cross-border settlement via a single regional currency, with IBM as the technical partner. This initiative sought to explore whether distributed ledger technology could enable cross border payments between the two countries to be 'reimagined': reducing transfer times and costs between banks, using a new dual issued digital currency. The results of the pilot project were consistent with the results of similar pilots conducted by a number of central banks. These results showed that the distributed ledger technology would enable central banks to develop payment systems at both local and cross-border levels.

It is not just the Middle East where adoption is being felt. In South Africa, key financial regulators, such as the South African Reserve Bank, released a policy paper in April last year with recommendations for the regulation of cryptocurrency. Meanwhile, Kenya is set to experiment with a digital tax from January this year, which can open the door to more crypto regulation. The country also passed a startup law last year as well.

Egypt, which in 2018 placed an all-out ban on cryptocurrency trading, appears to also be reconsidering that decision due to global demand and popularity of crypto. The ban in 2018 arose over concerns of money laundering, tax evasion and other illegal activities. However, Nigeria, which is the world's second largest Bitcoin market after the USA, has a firmer stance on cryptocurrency usage.[148] As a whole, AfCFTA could help bring more cross-border collaboration across African member states.

On a final note, due to the popularity globally of crypto there are developments that governments will implement. In Israel, for example, the Israeli Tax Authority (ITA) now requires its residents to disclose their cryptocurrency holdings for taxation purposes, according to a Globes report.[149]

HIGHLIGHT: BAHRAIN

Bahrain, which has been proactive in fintech innovations, is notable in the crypto and blockchain arena. In 2019, the Central Bank of Bahrain (CBB) issued the final rules on a range of activities relevant to crypto assets. The CBB Crypto-asset rules deal with the rules for licensing, governance, minimum capital, control environment, risk management, anti-money laundering/combating the financing of terrorism (AML/CFT), standards of business conduct, avoidance of conflicts of interest, reporting and cybersecurity for crypto-asset services. They also cover supervision and enforcement standards including those provided by a platform operator as a principal, agent, portfolio manager, adviser and as a custodian within or from the Kingdom of Bahrain – all according to the same CBB statement.

In the same year, crypto-asset brokerage firm Rain, announced: "We are happy to announce that Rain has acquired the Crypto-Asset Module (CRA) licence from the CBB. Rain is the first crypto-asset brokerage to earn a regulatory licence in the Middle East and joins an elite group of brokerages internationally. In addition to the licence, we are also pleased to announce that we have closed a seed round of $2.5million."

In terms of blockchain, it was endorsed by Bahrain's Economic Development Board back in 2017, which gave formal approval for 28 blockchain enterprises.

Catalysts in fintech supporting economic development

To help initiate fintech and drive the agenda across much of MEA, various economic development strategies, such as with the GCC countries, have put fintech and wider digital transformation at the forefront of much of their plans and implementation.

Visible consequences of the implementation of fintech across MEA have included both direct and indirect initiatives, accelerators and incubator programmes. Other mechanisms of support, such as venture capitalists or even family offices and other investment arms, have also been active. Despite the relative infancy of MEA as a whole compared to more established fintech ecosystems, the ecosystem to support the sector is important.

There has been involvement from investment outside of MEA but also MEA-native components that are helping develop and mature the ecosystem. The following chapter will highlight some across each country, but some examples include:

MIDDLE EAST - EXAMPLES

Dubai's DIFC Fintech Hive, Abu Dhabi's HUB 71, Saudi Arabia's Fintech Saudi, Qatar's Qatar Fintech Hub, Bahrain Fintech Bay, Israel's Fintech-Aviv and Jordan Fintech Bay as well as Flat6Labs, Fintech Egypt, Astrolabs, Oman Startup Hub, Oman Blockchain Society, Egyptian Fintech Association, Turkey's FINTR, Kuwait Banking Association, and MENA Fintech Association[150]

AFRICA – EXAMPLES

Flat6Labs (Egypt), Egyptian Fintech Association, Fintech Egypt, Africa Fintech Network (AFN), Nigerian Fintech Association, Mauritius Fintech Hub, Kenya Bankers Association (KBA), Alphacode of South Africa, Laboratório de Inovação do Sistema de Pagamentos de Angola (LISPA), Digital Lenders Association of Kenya (DLAK), African Women in Fintech & Payments (AWFP), Rwanda Fintech Association and Blockchain Association of Uganda[151]

MENA FINTECH ASSOCIATION
www.mena-fintech.org

MENA FINTECH ASSOCIATION(MFTA)

The MENA Fintech Association (MFTA) is an inclusive, not for profit association that fosters an open dialogue for the MENA fintech community, shaping the future of financial services in the region.

"MENA Fintech Association is committed to fostering an open dialogue for the fintech community to make a positive change in the region, to help each other understand better and identify opportunities to be tapped in this region. Comprising of technology firms, fintechs and investors looking for opportunities to deploy capital into this region, to connect people and ecosystems together. That has always been a role that the MENA Fintech Association has played." *Nameer Khan, chairman, MENA Fintech Association*

Group
Emerald
Global Premier Business Partnership

EMERALD GROUP

Emerald Group is an economic group that focuses on developing and creating value through investments and advisory services in a wide variety of sectors, from natural resources to finance.

OFFICES: Dubai with offices in London, UK, Lisbon, Portugal and Luanda, Angola.

N'Gunu Tiny, founder, chairman and CEO at Emerald Group, spoke last year with *The Fintech Times*. He said: "We are very much pro-financial technology. Technology can be a powerful tool when deployed correctly. It is the ability to bring people into the banking system and remove them from poverty. It also has the ability to level the playing fields for business. It can create so much powerful social good. So, in answer to that, Emerald fully embraces fintech and indeed all types of tech.

"I would say that Emerald Group (EG)'s drive toward financial innovation has expanded as innovations within finance have also expanded. For example, over the past few years, we have seen the exponential development of blockchain. Therefore, so has EG's involvement in the sector. We have the 'minds' and the mindset within the organisation to be able to adapt quickly to changing trends.

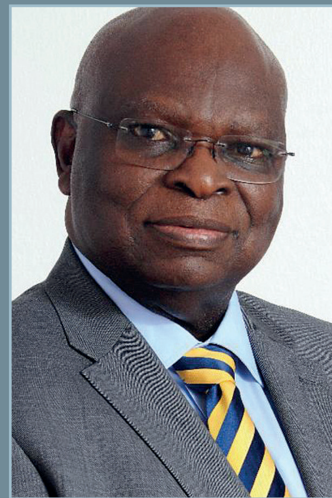
"In relation to distributed ledger technologies (DLTs), what I like about blockchain is that it can be viewed as the internet 3.0 and has the ability to build a stronger more secure world. Think what the internet did for information. We have emails, online music and video portals for example. Blockchain will do the same for assets. Imagine all real estate and art works being logged on a digital ledger rather than ownership stored on paper in some warehouse, as it still is in many parts of the world? Where you can take your rental investment, digitalise it and sell parts of it, instead of the entire flat. Where you can own a portion of a piece of art by a master, rather than the entire painting. The same logic applies for agriculture, you can own parts of a production field somewhere in the world and contribute to the local ecosystem."

AFRICA FINTECH NETWORK (AFN)

Africa Fintech Network (AFN) is the umbrella body for the fintech ecosystem in Africa. AFN is a platform that unites Africa fintech leaders, organisations and stakeholders through their country associations by creating an ecosystem that stimulates information exchange, ideation and the support and promotion of innovative technologies within the financial services sector across Africa and beyond. The network also serves as a platform for advocacy and coordinated regulatory interactions.

As of 2020, there are more than 500 active fintech companies in the African continent, about 80 per cent of which are of domestic origin according to AfriCo, a business intelligence platform providing data on private and public companies in Africa. With current membership that spans across 33 countries in Africa, AFN is set to ensure that fintechs in Africa gets equal visibility and opportunity.

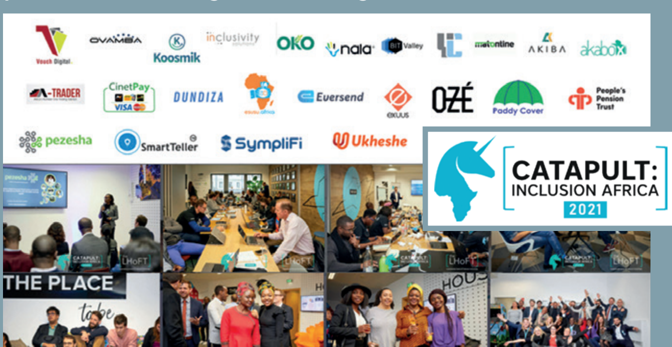
"The recent exciting developments in the innovation and fintech space in Africa gives a lot of hope for the future. I look forward to the realisation of the Africa of our dreams – the Africa we want – through an even development across all the fintech ecosystems in the 54 countries of Africa. This is one of the core objectives of the Africa Fintech Network." *Dr Segun Aina, president, Africa Fintech Network*



THE LHOFT (LUXEMBOURG HOUSE OF FINANCIAL TECHNOLOGY) FOUNDATION

The LHoFT Foundation, backed by the public and private sector, drives innovation for the financial services industry, connecting Luxembourg with the international fintech community. Developed by the LHoFT Foundation, CATAPULT: Inclusion Africa is an early-stage fintech bootcamp targeting companies focusing on financial inclusion in Africa, aiming to increase the chances of the participant firms to make an impact and to build bridges between the MEA region and Europe.

OFFICES: Headquartered in Luxembourg, with members and partners around the globe, including Africa.



CATAPULT: Inclusion Africa is a week-long bootcamp on the theme of financial inclusion. The bootcamp is organised and delivered by the LHoFT Foundation and supported by the Luxembourg Ministry of Foreign and European Affairs alongside many key strategic partners from the international finance and microfinance industry. For the 2020 edition of Catapult: Inclusion Africa, 13 African fintech startups were selected from 243 applications originating from 36 different countries.

- The CATAPULT: Inclusion Africa bootcamp covered a range of topics, including business model mapping, scaling strategies, peer due diligence processes, sales strategies, business plan presentation, operational and risk management, funding and capital raising as well as social impact.
- After two bootcamps, CATAPULT: inclusion Africa now includes a community of 24 alumni companies, still active and engaging with each other and the LHoFT team daily. Half of the companies have raised funds and /or have concluded major strategic partnerships following the programme.

EXAMPLES

- May 2019: Koosmik raised $2million in second seed round
- August 2019: Allianz has entered a cooperation partnership with the insurtech startup OKO
- July 2020: Ugandan fintech startup Eversend banks more than $1milion via crowdfunding
- January 2021: Ghanaian fintech startup OZÉ closes $700,000 seed funding round

The LHoFT Foundation will deliver a fully digital version of the CATAPULT: Inclusion Africa Bootcamp in May 2021, which will be followed by a (hopefully) in-person condensed three-day CATAPULT: Inclusion Africa programme early December, at the World Expo in Dubai.

Nasir Zubairi, CEO of the LHoFT, says: "Luxembourg is a global leader in financial services and, what some may not be aware of, is an international hub for microfinance and development. As the LHoFT, we act to drive innovation in financial services to ensure it best meets the needs of tomorrow. The Catapult: Inclusion Africa programme is a core pillar in our strategy; the programme brings together inspiring entrepreneurs that are committed to deliver real impact in Africa with technology and fintech solutions. Economic growth and social change are happening rapidly as innovative solutions are developed which allow those who had been financially excluded to lend, insure, save, and transfer money more easily. We aim to help participating firms ensure their solutions have the best chance of success."

vi. Summary

Fintech plays a growing role in the wider MEA economy. The following key points are highlighted in this chapter:

Diverse economies both developed and developing

The overall developed economies of the GCC coupled with the relative developing ones of Africa and other parts of the Middle East showcase the diversity that MEA's territory has. MEA is home to some of the world's richest and poorest countries.

Economic diversification supports fintech growth

Various economic developments plays a role in each MEA's growth. From the more visible GCC's prominent diversification efforts to the rest of Africa there have been challenges and opportunities across both fronts. The need for high-intensive knowledge-based sectors, such as fintech, plays across the future growth of the wider MEA economy.

Young and growing educated population

MEA has a young relative population. In addition, much of MEA, such as in the GCC, are also highly educated. Their aspirations and future prospects present an opportunity for fintechs growth and opportunities in the region.

MEA creates and attracts talent: A transient migration pattern

The region is a major source of not only workers across all professional levels but also attracted talent, in particular to the wealthier GCC and Israel. Therefore, remittances plays a large role in MEA.

Unbanked and traditional yet habits are changing

Much of MEA remains unbanked with traditional shopping and other interactions playing a large part in daily live. However, and in particular with Covid-19, digital solutions from fintech providers are making inroads.

Lots of fintech but still generally in its infancy

Despite boasting around 2,800 fintech solutions across MEA many of them are still in early stages. In addition, much of the wider ecosystem around to support it is still growing and developing. Nevertheless, parts of MEA are more mature in their ecosystem landscape for fintech.

Fintech is growing beyond the financial services space

It has expanded across insurance, Islamic finance and other parts of the ecosystem, such as in e-commerce, in particular with Covid-19 further driving digitalisation. This also includes the rise in cybersecurity and AI – to name a few.

Digital advancements and fintech looks to be concentrated in parts of MEA

It is evident that much of the GCC and Israel are far more advanced in the complexities of the digital infrastructure ecosystem. This is also apparent in Turkey and in Africa, where in particular Nigeria, South Africa, Egypt and Kenya appear to be active.

The next chapter will further elaborate on the fintech ecosystem of MEA, understanding where in the region opportunities are rising and looking at the key fintech hubs.

ii. Key emerging and premier fintech markets

The following section delves deeper into the Middle East and Africa through an analysis of key fintech markets and confirmation of information, reports and other research that talk about parts of MEA or MEA as a whole. This section will identify key fintech markets addressed in 2020 research by *The Fintech Times,* look at research and reports currently available and later rank them either as early-stage, emerging or premier player according to their overall fintech potential in a wider economic development lens.

This assessment is unique because it will take into account the current landscape of MEA in an economic development context, which is very important to factor in due to the nature of any sector to thrive and grow. Particularly unique for MEA is that economic development diversification and transformations are happening here. As highlighted in the previous chapter, regions, such as the GCC, have written and begun implementing their strategies to prepare for a future without oil and for a future that embraces digital and tools, such as fintech. Across in Africa, where countries have also implemented their own strategies, many have done this for various reasons – to help reduce poverty via collaborations with global institutions, such as the UN and World Bank, as well to diversify their economies.

A: SELECTION OF COUNTRIES IN MEA
THE METHODOLOGY OF THE '22'

The MEA region is home to more than 70 countries. This report takes a sample of key countries and analyses their fintech ecosystems.

What is a key country in the context of fintech? An initial pre-filteration through the coverage of *The Fintech Times* in 2020 via its newly launched Middle East and Africa section, coupled with current available primary and secondary data, was undertaken to assess the MEA region and that narrowed the list of countries to 22.

This was initial known fintech activity, overall wider advancements from an economic development perspective (specifically with relation to wider tech and fintech-specific) as well as general highlights through reports that are currently out and various consultancies that have covered either the Middle East, MENA, or Africa. *Note – this report includes both Israel and Turkey as well*. In alphabetical order they are:

Middle East and Turkey (Middle East and North Africa and Turkey): Bahrain, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Turkey and United Arab Emirates (UAE)
Africa: Egypt, Ghana, Kenya, Mauritius, Morocco, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Tunisia and Uganda

Once the countries were chosen based on the following criteria and data gathering confirmed, we ranked the countries accordingly.

DETERMINING INDICATORS

Two wider themes were determined to evaluate the fintech ecosystems of the initially narrowed list of MEA.

- Economic development as a whole – this determines the overall health, prosperity and advancement of the economy in question as a whole
- Economic development pertaining to the advancement of digital and fintech
- Digital and tech as a whole – how is the digital and tech ecosystem in the country
- Fintech – particularly for fintech an understanding of the landscape in the territory

Each of the following were applied that factored either one of the two above themes (in some cases such as the tech indicators it applies to both).

ECONOMIC DEVELOPMENT: ECONOMIC AND SOCIAL

Based on available data, a sample of economic and social indicators were used to understand the chosen MEA countries. The total of the scoring was weighted at 50 per cent:

- **Gross domestic product (GDP) per capita:** What is the GDP per capita in each country? This will help determine overall standard of living from its economic output. The higher the GDP per capita the higher the score.
- **Higher education enrolment:** The number of college-educated people in the country to assess human capital. For a sector as highly-skilled as fintech, understanding the college-educated population is a strong indicator. The higher the number based on population ratio the higher the score.
- **Ease of doing business:** Overall ease of business in the country? This helps understand the mechanisms for conducting business as a whole – as the easier to do business the better and more appealing it is for investors for instance. The higher the ranking the higher the score. The baseline of a World Bank Doing Business report was used.
- **Entrepreneurship:** A thriving economy requires ambitious people to start businesses. Available public data from the *Global Entrepreneurship and Development Institute 2018 report* helped grasp this in MEA.
- **Human Development Index (HDI):** For any economy looking merely at economic figures isn't enough to grasp the true development of any country. Therefore, a human development index was factored in via public data from the United Nations Development Programme (UNDP) 2020 Human Development statistics.
- **Population:** A quantitative metric is needed and population is good to determine the size of the country. The larger the population the larger the score.

ECONOMIC DEVELOPMENT: TECH, DIGITAL AND FINTECH

Based on available data the following sample data of tech and digital ecosystem as well as fintech specific were gathered. Tech and digital received a total weight of 20 per cent while fintech specific received 30 per cent.

ECONOMIC DEVELOPMENT: TECH AND DIGITAL ECOSYSTEM

- **Number of startups:** How many startups are based in the country? This can determine an overall ecosystem of tech and its strength in the respective country and overall entrepreneurship. The higher the number the higher the score
- **Number of tech/startups (factoring in population):** A holistic approach is needed so the number of tech/startups also has its own indicator that takes into account the number of startup/tech company per person. The lower the number per person the higher the score
- **VC deals:** How many VC deals were done in the ecosystem? The higher the number the higher the score as it showcases investment activity, which helps play a key role in fintech

ECONOMIC DEVELOPMENT: FINTECH

- **Regulatory sandbox:** Is there a regulatory sandbox in place? This indicator shows how advanced and sophisticated the offering is for fintechs to promote and grow their innovations. If the country has one it gets the highest score.
- **Number of fintech companies:** Similar to the tech/startup indicator, the number of fintech companies whose country also has a strong fintech ecosystem with respect to companies. The higher the number the higher the score.
- **Number of fintech companies (factoring in population):** A holistic approach is needed so the number of fintech also has its own indicator that takes into account the number of fintechs per person. The lower the number per person the higher the score.

- **Unicorns:** This indicator shows whether there are unicorns in the country to help their fintechs and wider tech companies reach unicorn status. It's an indicator to show growth of fintech companies beyond just startups and small and medium firms (SMEs). In addition, it also shows that the ecosystem has investors at that level of funding; the higher the number the higher the score.

SCORING MECHANISM

A 10-point scoring across all the indicators was carried out, where one was low and 10 being the highest. This applied to nearly all the indicators minus the regulatory sandbox question and the consistency of regulations, where those that were a yes got the highest score if no the lowest score of one and in progress received a high-medium score of seven.

The means that each score was taken across each individual indicator. We could then see, for each indicator, which countries ranked the highest, mid-range or low in each one. Afterwards, a holistic view of a country's performance in the study helped provide an overall fintech tier ranking.

SUMMARISATION OF THE FINTECH TIER CATEGORIES

Each of the countries sectored were then ranked in the following three-tier categories in terms of their fintech ecosystem activity.

Premier global hub - (Tier One) – the top countries in the study that received an overall high score were chosen. It was due to their high scores demonstrated by a the various indicators under the three themes. They would have had to score from seven to 10.

Emerging hub– (Tier Two) – beyond the top three in the premier ranking, the top 10 countries that scored high were placed in the emerging category. Their overall initiatives and future aspirations were noted coupled with their high scores in the study. They would have had to score from three to 6.9.

Early stage – developing (Tier Three) – the remaining countries that were not premier or emerging were then ranked in the early stage-developing category. Their fintech sector overall is in its infancy compared to some of their more established global peers but through time, if investment and dedication continues, their fintech ecosystem can increase their ranking status. These were ones that scored under 2.99.

Note, the other countries in MEA that were not featured would also fall in the Tier Three status but most likely at the lower spectrum overall. Due to lack of data and limitations of research this is why not every MEA country was analysed. This is coupled with data available and knowledge of the MEA fintech space.

In addition, the previous chapter showcased a concentration of fintech in MEA. However, this exercise is important to put aside any bias and have a quantifiable categorisation that factored in various economic development indicators (both as a whole and tech and fintech-specific), in this case a three-tier ranking, of various fintech hubs in MEA.

The ranking is not meant to be a competition of each country but rather an understanding, based on the current state of a country in the 22 chosen (economic development as a whole and economic development in the context of both tech and fintech-specific) how they fare based on the explained methodology. The research emphasis the placement of the countries in the tier categories rather than their individual scores. Details of the scoring results can be found in the appendix.

Finally, as stated, data used was information that was publicly available when this report was written in 2020 to early 2021. In some instances, the most accurate data was used when possible. Limitations stem from some data available publicly or unbalanced data as a consequence from the effects of Covid-19.

B. SUMMARY OF THE 22 COUNTRIES

The following showcases the 22 countries of MEA analysed in this report based on the indicators highlighted in the methodology

When looking at the average figures overall, the economic development indicators (both wider, as well as tech and fintech-specific) defines the whole region to be at least a very high-middle income economy. However, the report analysis recognises that not all 22 countries will be the same across the various indicators.

The following provides an overview of all selected 22 MEA countries, including a recap of the findings from the research, to show which can be classified as a premier, emerging or early-stage fintech hub. Running in alphabetical order, each country page features key fintech catalysts, as well as a fintech fact. For some countries, a catalyst in focus will also be highlighted. The findings are the averages.

36,648,235
Population in millions
GDP per capita
$25,505.33

33%
Enrolled in higher education

68.99%
Ease of doing business

32.78%
Entrepreneurship

0.72
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

92,106.53
Ratio of tech startups (per person)

845.91
Number of tech startups

56
Number of VC deals

126
Number of fintech companies

572,236.67
Ratio of fintech startups (per person)

Many have Regulatory sandbox

Most do not have Unicorns

Sources 152-229

1 BAHRAIN

KEY ORGANISATIONS Bahrain Fintech Bay, Bahrain Economic Development Board, Central Bank of Bahrain (CBB)

OVERVIEW Bahrain is home to more than 350 licensed financial institutions, representing a rich mix of international, regional and local names. The financial sector is one of the most important non-oil sectors in the Kingdom's economy, which accounts for more than 17 per cent of its GDP. Manama is its capital, largest city and financial hub. The licensed companies cover a full range of financial services, with specialities in wholesale banking, insurance and fund and asset management. Bahrain's banking system consists of both conventional and Islamic Banks and accounts for more than 85 per cent of the total financial assets.

Long revered as the historical hub in the Middle East, particularly for its financial sector, the country has been innovative, particularly when fintech came along. The financial sector is one of Bahrain's largest employing sectors; Bahrainis represent more than 66 per cent of the sector's workforce. Since 2002, the Central Bank of Bahrain (CBB) has been the single regulator and source for governance in the financial sector; it also is ranked first in the Middle East and Africa region for finance freedom.

Bahrain has its own economic development and diversification ambitions. Part of its wider national strategy, the Economic Vision 2030 was launched in October 2008. Some recent highlights include:

FINHUB 973 – The Central Bank of Bahrain, in cooperation with the Bahrain Economic Development Board, Bank ABC, ila Bank, BENEFIT, National Bank of Bahrain (NBB) and Bahrain Islamic Bank (BisB), launched FinHub 973, the first comprehensive digital fintech lab in the region, regulated by the CBB.[230]

FIRSTS IN THE GCC REGION – Bank ABC launched Ila Bank, National Bank of Bahrain started open banking services, Bahrain Islamic Bank unveiled Bahrain's first fully digital bank branch and Meem launched the first Sharia compliant digital banking service.[231-232]

Despite Bahrain's small size, it began diversifying its economy before economic development and diversification was in full force in much of MEA and most likely will to continue innovating. This is why it is an emerging fintech hub, ranking in the upper tier alongside Saudi Arabia.

Wider economic development

1,701,575
Population in millions
GDP per capita
$23,503.977

56%
Enrolled in higher education

76%
Ease of doing business

45.10%
Entrepreneurship

0.85
Human development index

2 EGYPT

KEY ORGANISATIONS Egyptian Fintech Association, Fintech Egypt, Flat6labs, Central Bank of Egypt (CBE)

OVERVIEW Egypt is home to megacity Cairo. If counting the Greater Cairo area, it is one of the world's largest cities with more than 20 million inhabitants (in MEA it is the largest). Cairo is a major financial hub in MEA. With regards to fintech, Egypt in 2019 ranked first for number of investment deals (142) in the Middle East and North Africa, according to MAGNiTT's 2019 Egypt Venture Investment Report, accounting for 25 per cent of total deals in the region; by total funding second after the United Arab Emirates by total funding ($95million), accounting for 14 per cent of total funding raised in MENA. Egypt's population is large yet underutilising solutions that fintech and wider digital can facilitate. This also stems to general banking, where, it is estimated that 67 per cent of Egypt's population is still unbanked.

Egypt is prioritising financial inclusion, digital economy and trade facilitation. Both the Central Bank of Egypt (CBE) and financial regulatory authorities are establishing fintech laws that will enable multiple fintech use cases, while also launching sandboxes to ensure consumer protection. In addition, building sovereign funds to close the gap of early-stage investments in fintech startups will help contribute to the creation of a long pipelines of fintech startups that will help the country overall.

New banking laws – The Central Bank of Egypt in 2020 passed new banking laws that also have strong fintech components to it.[234]

Fintech strategy – In March 2019, the CBE launched its fintech strategy, which aims to make it a 'regionally recognised fintech hub in the Arab world and Africa, home to next generation financial services, talent and innovation development'.[235-236]

The large market, bridge between Africa and the Middle East and its commitments by the government to boost and grow its fintech space has been noticed and applauded, particularly in the past few years. This is why it is an emerging fintech hub in MEA.

FINTECH FACT Over the past few years, different fintech accelerators and fintech-focused venture capital funds have launched with government initiatives that have grown the ecosystem in Egypt. Sectors like paytech, insurtech and regtech are represented among its wider level of ecosystem fintech support.[237]

IN FOCUS **Egyptian FinTech Association** is a cross-industry, membership based, non-profit organisation. Designed as a platform that facilitates cooperation and co-creation between fintech ecosystem players and stakeholders to build solutions to pressing business issues while creating the intended social impact. Members include banks, insurance,

FINTECH FACT The transformation of Bahrain's fintech ecosystem has been driven by regulatory reform, which has allowed subsectors like crowdfunding, insurtech, robo-advice and crypto-asset platforms grow. The CBB is continuously reforming policies and Bahrain was also the first in the region to build an onshore regulatory sandbox.[233]

IN FOCUS **Bahrain FinTech Bay** is a leading fintech hub in Manama. It provides the ecosystem with a physical hub to incubate insightful, scalable and impactful fintech initiatives through innovation labs, acceleration programmes, curated activities, educational opportunities and collaborative platforms. BFB partners with governmental bodies, financial institutions, corporates, consultancy firms, universities, associations, VCs and fintech startups to bring the full spectrum of financial market participants and stakeholders together. Since launching in 2018, BFB has attracted more than 100 local and international partners, 17 venture acceleration platform partners, incubated 50 fintechs, five accelerator programmes, three conferences and published eight in-depth market ecosystem reports.

Bahrain Economic Development Board (EDB) is a promotion agency attracting investment into the Kingdom. The EDB works with the government and investors to communicate key strengths and to identify where opportunities exist for further growth through investment. The EDB focuses on several economic sectors that capitalise on Bahrain's competitive advantages, such as financial services, manufacturing, tech and innovation, tourism, education, healthcare, logistics and transport.

Bahrain has capitalised on its banking expertise to grow a fintech ecosystem. This ecosystem aims to offer both traditional banking institutions and fintechs a collaborative space to test and scale new products across GCC markets. Different organisations contribute to ensure that Bahrain's fintech ecosystem is one of the most dynamic and competitive in the region.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – HIGH (TIER TWO) CATEGORY

Further economic development, tech & fintech specific highlights

8,507.88 Ratio of tech startups (per person)

200 Number of tech startups

20 Number of VC deals

100 Number of fintech companies

17,015.75 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

microfinance, leasing and telecommunication companies. In addition to governmental agencies, universities and mature and aspiring fintech startups.

As an outspoken advocacy of fintech as the shaper of the future of the financial industry and the enabler of more inclusive financial services, the Association has won like-minded partners. As its grows its member base and network of partners, it wants market needs prioritised as it lobbies for regulatory reforms. To educate, inform and communicate through channelling relevant information to members and the ecosystem as a whole is one of its priorities to promote transparency and consumer protection.

Noha Shaker, the founder and secretary general of the Egyptian FinTech Association, says: "The fintech scene is collaborative by nature, we encourage and support our members and partners to adopt that value co-creation/ value sharing mindset. Egypt has all the pillars required to be a leading fintech hub. We have agreed to bake the cake before we argue whose share should be bigger!

"Fostering innovation among our incumbent members and partners to accelerate the growth of fintech companies – Egyptian or international – lies at the heart of all our activities. As a thriving fintech hub in the region, the Egyptian FinTech Association will continue to create synergy among ecosystem players and stakeholders, driving sustainable growth of the promising and emerging Egyptian fintech sector."

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - MIDDLE (TIER TWO) CATEGORY

102,334,404 Population in millions

GDP per capita **$3,020.031**

35% Enrolled in higher education

60.1% Ease of doing business

25.9% Entrepreneurship

0.71 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

482,709.45 Ratio of tech startups (per person)

212 Number of tech startups

47 Number of VC deals

70 Number of fintech companies

1,461,920.06 Ratio of fintech startups (per person)

Yes Regulatory sandbox

1 Fawry) Unicorns

3 GHANA

KEY ORGANISATIONS Africa Fintech Network, Bank of Ghana

OVERVIEW Ghana is an emerging economy in Africa, in particular with Accra, the capital, largest city and financial hub of the country. It underwent its own national strategy titled Ghana Vision 2020, which in its scale was extraordinary for the continent, where 'by the year 2020, Ghana would have achieved a balanced economy and middle-income country status and standard of living, with a level of development close to the present level of development in Singapore'. It was a 25-year development plan that aimed to transform the country.[238] Despite potentially not achieving all of its aspirations at the time, the country has developed from an economic development perspective and has become a hub in particular in West Africa. It is usually regarded as a fast and stable economy in the continent and this is reflective in its growing financial and fintech sector.

The country's financial services industry can be categorised into three main sectors: banking and finance (including non-bank financial services and Forex Bureaux); insurance; and financial market/capital markets.

Futhermore, according to Ghana Investment Promotion Centre, the Government of Ghana has shown strong commitment to financial sector development. For instance, in 2002 the Cabinet approved the Financial Sector Strategic Plan (FINSSP) in 2003, which aims at broadening and deepening the financial sector. Improved governance in the financial markets remains an important focus for the continued reform agenda.[239]

Last year, the Bank of Ghana announced the establishment of a new fintech and innovation office and this will help the Bank's cash-lite, e-payments and digitisation agenda. The emergence of fintech solutions has introduced significant complexities that require the sector supervisor's focus to understand and supervise effectively and the justification behind the new office.[240] Other developments in progress include a new startup bill aiming to be approved this year and the recent launch of a digital financial services (DFS) policy as well. In February this year, it was announced by the Bank of Ghana that it was launching a regulatory sandbox pilot via a partnership with EMTECH.[241-242] In terms of the African continent, besides the big four countries of Nigeria, South Africa, Kenya and Egypt, Ghana, as what this report also confirms, is also a market to watch. This is why it is in the early-stage fintech hub category, ranking high in that category. Through time its efforts and economic development can ensure it becomes an established emerging fintech hub.

FINTECH FACT According to Modern Ghana, payment solution companies such as mobile money services operated by telcos, smartphone applications, such as zeepay and expresspay, crowdfunding apps like GoFundMe and Kickstarter, insurtech and distributed ledger technologies, such as blockchain and cryptocurrencies, are all key components of the country's fintech ecosystem. It also says that telcos are leading the pack in terms of payment solution fintechs.

Furthermore, with collaboration with commercial banks, banking services are more decentralised and scaled up to cover a much wider demographic which erstwhile were limited by the lack of bank branches in their communities, therefore making the fintech environment there unique.[243]

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - EARLY (TIER TWO) CATEGORY

31,072,940 Population in millions
GDP per capita **$2,202.116**

17% Enrolled in higher education

60% Ease of doing business

21.2% Entrepreneurship

0.61 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

62,145.88 Ratio of tech startups (per person)

500 Number of tech startups

10 Number of VC deals

71 Number of fintech companies

437,647.04 Ratio of fintech startups (per person)

In development Regulatory sandbox

0 Unicorns

4 ISRAEL

KEY ORGANISATIONS Startup Nation Central, FinTech-Aviv, Bank of Israel, Israel Innovation Authority, Fintech Community of Israel, Fintech Ladies IL

OVERVIEW While Israel might not be a big country in terms of its size and population, its largest city – Tel Aviv – is still a major financial centre and its reputation as a startup hub developing innovation is recognised globally. In terms of the financial ecosystem in Tel Aviv and wider Israel, the country has a noticable sector that includes financial services, fintech and wider tech.

Israel is often referred to as a 'startup nation' as it has a high concentration of startups – at least 6,000 per capita or 1,400 startups per person – which is the highest in the world. According to a report from Deloitte, 2,000 startups in Israel were founded in the past decade with another 3,000 small and medium-sized startups and high-tech companies (30 growth companies, 50 large technology companies and 300 multinational corporations' research and development (R&D) centres. Israel is home to a thriving tech community and is the birthplace of many innovations in tech, such as Moovit and Waze (the latter got acquired by Google for $1.1billion in 2013). This entrepreneurial spirit, coupled with a large talent pool, gives the fintech community an advantage to create innovation.

FINTECH FACT With more than 750 fintechs in the country, Israel's community is a diversified one – encompassing subsectors, such as trading and investing, payments and money transfer, regtech, cyber and insurtech, to name a few.[252]

IN FOCUS **The Israeli Fintech Association – FinTech-Aviv**

One of the world's largest fintech communities, operating since 2014, the Association consists of more than 30,000 entrepreneurs, fintech ventures, financial institutions, leading professionals and investors. It focuses on ways to support and facilitate the exporting of financial technologies to different regions in order to bridge the technology gap of financial institutions on different levels.

Nir Netzer, chairman of FinTech-Aviv, says: "In this unprecedented time of new economic and political order in the Middle East, we're honoured to extend our relationship and partners network to different regions to initiate new collaborations in order to facilitate the export of Israeli technologies to new markets. The FinTech-Aviv community and its members proudly hold the torch of this exciting initiative and are humbled to be leading Israeli fintech companies towards the exploration of new horizons with new business partners."

8,655,535
Population in millions
GDP per capita
$43,641.398

61%
Enrolled in higher education

76.7%
Ease of doing business

65.4%
Entrepreneurship

0.92
Human development index

Wider economic development

1,442.59
Ratio of tech startups (per person)

6,000
Number of tech startups

522
Number of VC deals

Further economic development, tech & fintech specific highlights

750
Number of fintech companies

11,540.71
Ratio of fintech startups (per person)

In development
Regulatory sandbox

20
Unicorns

The country's fintech scene has soared in recent years. In 2019, equity investments in Israeli fintech reached $1.8billion (five per cent of all venture stage fintech investments worldwide), more than double the amount raised in 2018. Israeli fintech recorded six mega rounds, totaling more than $1billion, compared to three mega rounds between 2014 and 2018. In wider tech and investment, Israel is home to seven unicorns – the most in the region – including Payoneer, Lemonade, Rapyd and eToro.[244-247]

Despite its advancements, there are opportunities to further boost the ecosystem. The Israeli government is in discussions to have a regulatory sandbox, while banks and other financial institutions will have to further adapt and incorporate fintech and wider digital transformation. Despite currently lacking national strategies in fintech and artificial intelligence, the country's ecosystem is advanced and performed well organically. In addition, 59 per cent of the 41 unicorns have their main headquarters abroad and generally much of Israeli talent and innovation goes on to larger pastures.[248-251]

Despite challenges, the title of premier global fintech hub is fitting for the startup nation.

The Fintech Community of Israel – City TLV

A non-profit organisation, the leading fintech ecosystem in Israel, enjoys the membership of companies and individuals who share the vision to make Israel a global leader in financial innovation. Israel's fintech industry is growing by the day and attracts billions of dollars in foreign direct investment and enjoys the entrepreneurial spirit that is so common in the startup nation.

"We clearly observe that if, before the Covid-19 pandemic, fintech has provided an opportunity for financial and other business entities to transform the relationship with their customers, it has now become an absolute necessity. Our vision is to become the forefront of this trend. VC money is heavily flowing to fintech firms, more M&As and collaborations are being formed and the expected massive 5G adoption promises to shift the consumer paradigm dramatically," says chairman Shmuel Ben-Tovim.

OVERALL FINTECH HUB STATUS:
PREMIER GLOBAL HUB (TIER ONE) CATEGORY

5 JORDAN

KEY ORGANISATIONS
Jordan FinTech Bay, Central Bank of Jordan

OVERVIEW Jordan has a very young population, where more than 60 per cent of the population in the landlocked country surrounding Israel, the West Bank, Saudi Arabia, Iraq and Saudi Arabia, is under 30 years old. Statistics show that Jordanians are often highly educated and are well connected with the world.[253] In 2019, under the patronage and in the presence of His Royal Highness Prince Al Hussein bin Abdullah II, Crown Prince of Jordan, and in line with the UAE-Jordan strategic partnership in government modernisation, the One Million Jordanian Coders initiative was launched to propel Jordan to become one of the world's most advanced places for coding via educating and empowering youth.[254]

Therefore, in terms of talent and innovation in tech, Jordan is highly regarded in the MENA region. However, as highlighted in this report for much of MEA, job prospects and limited opportunities often lead some of the best and brightest to immigrate – whether it be to other places such as in the GCC region or outside of MEA.[255]

In terms of its wider development, to help further grow the economy and to provide the youth with further highly skilled opportunities, Jordan 2025: A national vision and strategy charts the path for the future, with strategies and priorities – identified


Temple of Hercules at Amman Citadel in Amman, Jordan

6 KENYA

KEY ORGANISATIONS Africa Fintech Network, Central Bank of Kenya (CBK), Digital Lenders Association of Kenya

OVERVIEW Kenya, in particular its commercial and financial hub of Nairobi, is a major player generally from an economic point of view not just in East Africa but the African continent as a whole. Dubbed 'Silicon Savannah', Nairobi has a strong fintech and wider tech and financial services ecosystem and is also the capital and largest city of the country.

As a whole, Kenya's financial sector is the third-largest in Sub-Saharan Africa and it makes a significant contribution to economic growth and job creation. Through Vision 2030, which is the country's own economic development strategy, Kenya aims to create a 'vibrant and globally competitive financial sector'.

According to the 2019 FinAccess Household Survey, compiled in collaboration with the Central Bank of Kenya, Kenyan National Bureau of Statistics and FSD Kenya, 82.9 per cent of the adult population has access to at least one financial product.

Kenya had the largest fintech funding for its companies in Africa at $149million. For example, the Kenyan parliament has published a Startup Bill, whereby the Kenyan government is aiming to develop a number of incentives for startups. This is in addition to having a protection for intellectual property among several interesting provisions. The Startup Bill 2020 provides a framework for the development of innovative entrepreneurship, establishing incubation hubs, and building a network of global and regional investors. Also, in 2019, the Capital Markets Authority of Kenya launched a regulatory sandbox.

FINTECH FACT Strengths within fintech in the largest city in Kenya are in payments, remittances, bank and lending technologies. Nevertheless, mobile money and lending platforms dominate Kenya's fintech industry both in terms of subscription numbers and financial performance. Note, it is hard to describe the success of Kenya and Africa as a whole without mentioning M-Pesa, which has been a posterchild for the continent with respect to fintech.

IN FOCUS **Kenya Fintech Association** – The organisation represents more than 60 registered fintechs in Kenya and looks forward to playing a part in the development of the sector in the country. Kenya is the home of mobile money which plays a major role in the fintech ecosystem. In the last three years, Kenya has attracted hundreds of millions of dollars in fintech startup funding. The regulatory environment is evolving, and the KFA hopes to play a major part in shaping the conversation.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - EARLY (TIER TWO) CATEGORY

through the assessment of the sectoral challenges for accelerating the country - for economic growth and development by 2025.[256]

Both in terms of fintech and wider tech, Jordan's ecosystem especially in the latter plays a sizeable role in the MENA region. There are other mechanisms coming into fruition to support its fintech sector in particular. For instance, Jordan FinTech Bay, a world class fintech ecosystem builder located in Amman is dedicated to driving innovation in Jordan and future-proofing its financial services industry.

Other innovations and adoption of fintech have been making inroads in Jordan. An example of a successful Jordanian fintech startup is Whyise, co-founded by Reem Khouri and Ayad Taher in 2018. In the spring of 2019, the World Economic Forum selected Whyise as one of the 100 Arab startups shaping the Fourth Industrial Revolution.[257]

A strong organic highly educated and relatively entrepreneurial background coupled with its aspirations to grow in fintech and wider tech puts Jordan as an emerging fintech hub.

FINTECH FACT Ahli Bank, a leading Jordanian financial institution with a steeped national history and heritage for more than 63 years, established the AHLI FINTECH company in August 2017, making it the first fintech company fully-owned by a licensed bank in Jordan.[258]

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - MIDDLE (TIER TWO) CATEGORY

10,101,694
Population in millions
GDP per capita
$4,405.50

54%
Enrolled in higher education

75%
Ease of doing business

36.5%
Entrepreneurship

0.73
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

20,203.39
Ratio of tech startups (per person)

500
Number of tech startups

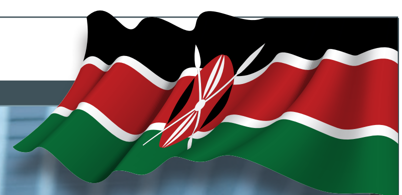
44
Number of VC deals

28
Number of fintech companies

360,774.79
Ratio of fintech startups (per person)

Yes
Regulatory sandbox

–
Unicorns



53,771,296
Population in millions
GDP per capita
$1,816.547

11%
Enrolled in higher education

73.2%
Ease of doing business

18.4%
Entrepreneurship

0.6
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

89,618.83
Ratio of tech startups (per person)

600
Number of tech startups

52
Number of VC deals

150
Number of fintech companies

358,475.31
Ratio of fintech startups (per person)

Yes
Regulatory sandbox

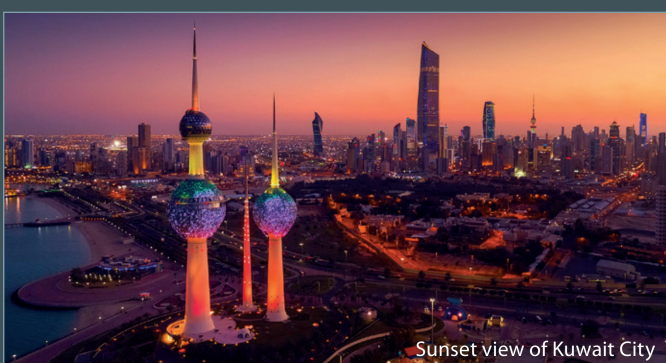
0
Unicorns

7 KUWAIT

KEY ORGANISATIONS Central Bank of Kuwait, Kuwait Banking Association, Sirdab Lab

OVERVIEW In the Middle East and particularly in the Gulf region, Kuwait has been a historical regional hub for the financial services industry. Even today, Kuwait's financial system comprises four sectors: banking, insurance, other financial institutions and investment funds. There's more than 100 financial institutions offering financial products and services in the country.

The State of Kuwait has its Kuwait Vision 2035 or, as it says on its website, the 'New Kuwait'. According to the Ministry of Foreign Affairs Website for the State of Kuwait: "Kuwait's 2035 vision aims on transforming Kuwait into a financial and trade hub regionally and internationally, and becoming more attractive to investors. Where the private sector leads the economy, creating competition and promoting production efficiency." Although its fintech sector might not be as large as its other fellow GCC partners, there is still innovation happening. For instance, Kuwait International Bank (KIB) at the start of 2018 started adopting innovative technologies to create a better banking experience – a key component of its transformation was a comprehensive digital strategy on both online and mobile platforms.



Sunset view of Kuwait City

The Central Bank of Kuwait (CBK) has been leading on various initiatives to transform Kuwait and build its fintech ecosystem, part of its wider transformation strategy. First, CBK has recently established the regulatory sandbox, which launched in November 2018, to further support fintech startups and entrepreneurs. Second, another major initiatives is the Kuwait National Payment System (KNPS), which is in collaboration with local banks and payment gateway to roll out in two phases. In terms of practice, an example of banks embracing fintech solutions is Thales supplying Commercial Bank of Kuwait (CBK) with its Gemalto Trusted Services Hub (TSH) that offers CBK customers the freedom and convenience of secure contactless payments, on their smartphones.[266]

Despite the challenges with Covid-19, Kuwait is a highly developed and affluent country with a drive to diversify its economy via Kuwait Vision 2035. Fintech, as financial services has played a historical role in the economy, can be a strong forefront in that.[267] Therefore, it is considered to be an emerging fintech hub.

FINTECH FACT Banking in Kuwait is dominated by retail business, with personal loans/financing comprising 40 per cent of total facilities. With regards to fintech, CBK has focused on the continued development of its regulatory frameworks, mainly concerning cybersecurity and electronic payments.

IN FOCUS **Regulatory sandbox from the Central Bank of Kuwait**

In line with its vision and aim to encourage and adopt innovation in fintech, the Central Bank of Kuwait has issued the regulatory sandbox framework document which encourages both companies and individuals looking to provide innovative products and services, that are built on or associated with electronic payment of funds and that utilise new technology or an existing technology in an innovative way, to test their innovations within a methodology that ensures the safety and soundness of the financial and banking sector.

The regulatory sandbox framework includes four stages to be completed within one year at the most. The regulatory sandbox starts with the application stage of the proposed product or service, then the evaluation stage where thorough evaluation, which covers technical, security, and regulatory aspects, of the application will take place, followed by the experimentation stage of the proposed product or service in a testing environment, and finally the accreditation stage, where CBK grants its approval (or rejection) to deploy the proposed product or service in the local market.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – MIDDLE (TIER TWO) CATEGORY

4,270,571 Population in millions
GDP per capita **$32,031.98**

55% Enrolled in higher education

67.4% Ease of doing business

42.8% Entrepreneurship

0.81 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

121,352.86 Ratio of tech startups (per person)

200 Number of tech startups

6 Number of VC deals

28 Number of fintech companies

152,520.39 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

8 LEBANON

KEY ORGANISATIONS Banque Centrale du Liban, The StartechEUS, Beirut Digital District

OVERVIEW Before the coronavirus pandemic, Lebanon's economy hit a few bumps. Nevertheless, the Lebanese are very resilient people – having gone through various cycles of downturn in their economy, such as the Lebanese Civil War from 1975-1990. Lebanon's recovery from that has been promising. Particularly both and prior to the civil war, Beirut (the capital and largest city of Lebanon) is a major financial hub in the Middle East and was nicknamed the 'Paris of the Middle East'. Before cities like Dubai and Abu Dhabi in the United Arab Emirates and Manama in Bahrain, Beirut prior to the civil war was the financial hub of the Middle East. It has its own home-grown banks which includes Bank Audi, BLOM Bank, Fransabank, Societe Generale de Banque au Liban (SGBL), Byblos Bank and Bank of Beirut.

Particularly in Beirut, the country's ecosystem supporting fintech has been strong given its current economic and political climate. For example, StartechEUS launched in 2019, which according to its website is a next-generation fintech studio that builds technology-enabled companies empowering the financial services industry – from growth to a successful exit in international commercialisation. Also, there are various accelerators and incubators in the country,

FINTECH FACT In 2017, 54 per cent of people with a bank account have adopted digital banking in Lebanon. In addition, in 2016, Lebanon ranked second in the region for the percentage of people who only used mobile banking. The country as a whole offers opportunities not just in fintech as a whole but in its sub-sectors, such as insurtech and e-payment and paytech.[269]

6,825,445 Population in millions

GDP per capita **$7,784.317**

60% Enrolled in higher education

54.3% Ease of doing business

31.5% Entrepreneurship

0.74 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

68,254.45 Ratio of tech startups (per person)

100 Number of tech startups

45 Number of VC deals

40 Number of fintech companies

170,636.13 Ratio of fintech startups (per person)

No Regulatory sandbox

0 Unicorns

such as the Berytech, speed@BDD, Smart-ESA and the UK Lebanon Tech Hub, the latter being a joint initiative by the Banque du Liban (the Lebanese Central Bank) and the UK government through the British Embassy in Lebanon. There is even an area in Beirut called Beirut Digital District, which is a cluster of innovation designed for the digital and creative community.

The Lebanese are very entrepreneurial. In 2018, out of a survey of nine countries in the region (UAE, Morocco, Egypt, Turkey, Iran, Lebanon, Qatar, Egypt and Saudi Arabia), Lebanon had the highest levels of both total early-stage entrepreneurial activity and established business ownership, where nearly one in four adults in Lebanon were starting or running a new business.[268]

Nevertheless, Lebanon had a challenging economic and political situation before the pandemic in 2020 and the Beirut blast last year did not help. Therefore, much of fintech's growth, which previously showed Lebanon as a strong contender in the region, will depend on the Lebanese economy to recover. Lebanon would be classified as an emerging fintech hub but at the lower spectrum and forecasted to decline unless if its situation improves.

IN FOCUS **Beirut Digital District (BDD)** is an all-inclusive professional urban development in the heart of Beirut City, designing hubs where the creative digital community can 'WORK, LIVE and PLAY'.

BEIRUT DIGITAL DISTRICT

Providing the ideal business environment, BDD combines the best infrastructure and support functions so that resident companies and entrepreneurs can focus on their customers and employees. A community for incubator and accelerator parks, it hosts innovative startups, as well as medium and large enterprises, until now it has finalised approximately 20,000m2 of office space and currently hosts 138 companies and up to 1,500 resident community members.

"BDD is built on the belief that Lebanese talent is the backbone of the Lebanese Economy and that by providing it with the right support system, it can flourish and boost our economy with it, by transforming Lebanon into a production hub," Mouhamad Rabah, BDD's CEO

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – EARLY (TIER TWO) CATEGORY

9 MAURITIUS

KEY ORGANISATIONS Africa Fintech Network, Bank of Mauritius, Mauritius Africa Fintech Hub, Economic Development Board

OVERVIEW Mauritius has transformed itself to be an upper-middle income economy boasting one of the highest GDP per capitas (second after Seychelles) in the African continent. Located in the Indian Ocean and acting as a gateway between the rest of Africa and South Asia, its economic development transformation continues with its Mauritius Vision 2030. By 2030 it aims to join the high-income countries through its political stability, resources and gateway between Africa and Asia. As with other strategies, a focus on highly-skilled employment, infrastructure and digital are key components to help take the country to 2030.[270] To note, Mauritius is also unique in that many people are both French and English speaking, which helps it cater to much of the world.

Generally in its financial services sector, the nation is recognised to be well-developed and well-capitalised with its banks often noted as being one of the highest in Africa.[271]

Over past decades, the country has provided stable regulatory and financial environment for foreign investors. This has shown the country to be a leading attractor for those looking to do business in the African continent as a whole.[272]

The country has a growing aspiration to be a regional fintech hub as well. This can be seen with the regulatory environment and overall stability and ecosystem as a whole now cascaded to fintech which has helped attract foreign investment.

The number of startups and companies that have been granted regulatory sandbox licences by Mauritius's Economic Development Board (EDB) is growing.[273] Subject to approval, the regulatory sandbox licence (RSL) allows an investor to develop innovative business activities, including fintech, for which no regulatory or legal framework exists in Mauritius. The RSL regime is spearheaded by the EDB and the latter acts as a coordinator with the different agencies in Mauritius (including the FSC and the Bank of Mauritius).

The RSL offers the opportunity to innovative fintech promoters ahead of the regulatory curve to operate through a bespoke set of terms and conditions, even in the absence of a formal licensing framework.[274]

Wider economic development

1,271,768 Population in millions

GDP per capita **$11,203.541**

41% Enrolled in higher education

81.5% Ease of doing business

N/A Entrepreneurship

0.80 Human development index

10 MOROCCO

KEY ORGANISATIONS Africa Fintech Network, Bank Al-Maghrib, HSEVEN, Casablanca Finance City (CFC)

OVERVIEW Morocco fares better than most of its African counterparts in terms of economic development when measuring GDP per capita and wider infrastructural advancements.[276] In terms of wider strategic vision, Morocco set out an ambitious national strategy – Maroc Digital 2020 – to boost economic development in particular to help digitally transform itself. It aims to be a regional digital hub and 2020 is the continuity of the impetus Maroc Numeric 2013.[277]

Though the fintech sector in Morocco is relatively small, it is constantly growing and has proved itself to be a dynamic market. The products and services that are available to Moroccans are extensive, but mainly linger around the payments and insurance sectors, with crowdfunding expected to soon join them.[278]

Banks account for nearly half of Morocco's financial system and, despite its small size, the country contains two of the largest banks in Africa, Groupe Banque Populaire and Attijariwafa. It is these banks that help contribute to the innovation seen in the sector, as many traditional financial institutions are working on their own new technologies in order to keep up with the services offered by fintechs and startups, as well as the traditional banks adopting fintech services for their own customers, such as mobile banking and other digitised platforms.

Downtown Casablanca, Morocco

The Banque Centrale Populaire Group also launched the first edition of the Fintech Challenge and Open Innovation programme aiming to collaborate with Africa's startups to support their innovation and growth. It is thought that launching this challenge has helped encourage further innovation in other sectors of fintech that are currently not as popular in the country, such as regtech and blockchain.

In terms of regulation, fintech is still a fairly new concept in the region and, as such, there is little legal framework when

FINTECH FACT There have been substantial innovation incentives for fintech in Mauritius, from an eight-year tax holiday in the latest budget for IP created here to an amendment to the investor permit, whereby innovator investors have less onerous conditions to get residence here and set up. Recent legal changes include a licensing framework for the custody of digital assets.

Wherever there are no regulations in place for a particular type of fintech activity, there is the RSL, which allows those operating to have a licence and jurisdiction while the laws and regulations catch up.

MAURITIUS | AFRICA FINTECH HUB

IN FOCUS **Mauritius Africa FinTech Hub (MAFH)** The Mauritius Africa FinTech Hub is a fast-growing ecosystem where entrepreneurs, corporations, governments, tech experts, investors, financial service providers, universities and research institutions can collaborate to build cutting-edge solutions for the emerging African market. MAFH exists to pave the way for international fintech companies and financial service providers to access the African market. Similarly MAFH facilitates African fintech ventures to do business across borders.

"2021 is going to be a big year for the fintech industry, in Mauritius and across the globe. Covid has changed human behaviour with regards to financial services, which has witnessed greater adoption of digital by both young and old. We have been joined by many new members in the last month, and the family keeps growing bigger daily! Mauritius will have a chance this year to shine in Africa, with the African Fintech Festival being confirmed for 16 to 18 June 2021.

"We look forward to seeing everyone there and let's keep working together to change the world as we know it for the better," Michal Szymanski, CEO, MAFH.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – MIDDLE (TIER TWO) CATEGORY

Further economic development, tech & fintech specific highlights

8,651.48 Ratio of tech startups (per person)

147 Number of tech startups

– Number of VC deals

19 Number of fintech companies

66,935.16 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

compared to other countries. No specific fintech businesses are prohibited from being created, however all are looked at on a case-by-case basis for regulations for banking, insurance and finance.

However, just because the regulation is relatively lacking this doesn't mean that the ecosystem is negatively affected – in fact the management of the regulators in the sector play a role in why it thrives.[279] Given the country's economic development yet infancy in its fintech space, it is a market to watch and is in the early-stage fintech hub category.

FINTECH FACT Casablanca is the largest city and commercial hub of Morocco. Much of its banks and growing fintech community are clustered there.[280]

CASABLANCA FINANCE CITY
القطب المالي للدار البيضاء

IN FOCUS **Casablanca Finance City (CFC)** is an African economic and financial hub located at the crossroads of continents. Recognised as the leading financial centre in Africa and a partner of the largest international financial centres, CFC has built a strong membership community of finance companies, regional headquarters for multinationals, service providers and holding companies. CFC offers its members an attractive value proposition and quality 'doing business' support to promote the deployment of their activities in Africa.

OVERALL FINTECH HUB STATUS:
ONES TO WATCH (TIER THREE) CATEGORY

36,910,560 Population in millions

GDP per capita **$3,204.095**

39% Enrolled in higher education

73.4% Ease of doing business

29.2% Entrepreneurship

0.69 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

73,821.12 Ratio of tech startups (per person)

500 Number of tech startups

4 Number of VC deals

20 Number of fintech companies

1,845,528.0 Ratio of fintech startups (per person)

No Regulatory sandbox

0 Unicorns

11 NIGERIA

206,139,589
Population in millions
GDP per capita
$2,228.859

10%
Enrolled in higher education

56.9%
Ease of doing business

19.7%
Entrepreneurship

0.54
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

62,.466.54
Ratio of tech startups (per person)

3,300
Number of tech startups

</>

38
Number of VC deals

250
Number of fintech companies

824,558.36
Ratio of fintech startups (per person)

In development
Regulatory sandbox

1
(Inter-switch)
Unicorns

KEY ORGANISATIONS Africa Fintech Network, Fintech Association of Nigeria, Central Bank of Nigeria

OVERVIEW In terms of population, Nigeria by far is the largest country in the African continent with – according to the World Bank – 200 million inhabitants. Nigeria's largest city and financial hub is Lagos, which houses more than 20 million people alone, according to the National Population Commission of Nigeria.

Lagos is home to a large financial services sector and banks, such as First Bank of Nigeria(FBillion), Access Bank, Ecobank and First City Monument Bank (FCMB). In addition, in terms of the wider tech ecosystem Lagos is home to various startup incubators.

The African internet economy is expanding quickly, with online commerce in the region growing 21 per cent year-over-year, 75 per cent faster than the global average. With respect to fintech, Nigeria's fintech landscape consists of 210 to 250 fintech companies, key stakeholders (banks, telecom companies and the government), enablers and funding partners (i.e. universities and research institutions, investors, incubators, technology and consumers). From Frost and Sullivan, Nigeria's fintech revenue is expected to reach $543.3million in 2022, a growth from $153.1million in 2017.

According to a report from McKinsey, 40 per cent of the population is financially excluded, giving Nigeria significant opportunities for fintechs across the consumer spectrum. From 2014 and 2019, Nigeria's fintech scene raised more than $600million in funding, attracting 25 per cent ($122million) of the $491.6million raised by African tech startups in 2019 alone, which was the second highest after Kenya at $149million. Recent highlights in the space include:

Regulatory sandbox – in 2020, the Securities and Exchange Commission announced it is working towards setting up a regulatory sandbox[281]

Mergers and acquisitions – Nigeria has hit global headlines, notably with Stripe acquiring Paystack for $200million[282]

There are still other opportunities for Nigeria to further foster its ecosystem in fintech and it has begun to do so. The country is just large enough (the largest country in MEA by population and one of the largest in the world) that fintech has huge potential to cater both to its professional class and the majority of the population – the working class and poor.[283-286] Therefore, the country with its economic potential, size and recent commitments to fintech puts it as an emerging fintech hub.

FINTECH FACT The payments, savings, lending, services (i.e. personal finance) and accounts are some of the fintech offerings that Nigeria has at present, according to a McKinsey report.[287]

IN FOCUS Fintech Association of Nigeria

An umbrella body for fintechs in Nigeria that connects stakeholders, accelerates fintech growth and advocates for an adequate environment for a thriving fintech ecosystem with the vision to make Nigeria one of the world's leading markets for fintech innovation and investment. With more than 200 members across 20 sectors of the economy, arrowhead for fintech regulation, accessible funding and availability of sufficient and employable digital skills among others.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB –MIDDLE (TIER TWO) CATEGORY

12 OMAN

KEY ORGANISATIONS Central Bank of Oman (CBO), Oman Startup Hub (OSH)

OVERVIEW Despite the country being overshadowed by the rest of its neighbours, fintech and wider digital transformation is part of the plan in the future. Oman, as with its neighbouring GCC countries, is undergoing economic development and diversification. Known as Vision 2040, Oman aims to be 'a diversified and sustainable economy that is based on technology, knowledge and innovation, operates within integrated frameworks, ensures competitiveness, embraces industrial revolutions and achieves fiscal sustainability'.

Examples of the fintech sector developments: Muscat Bank, the largest financial institution in the country, announced a new $100million fintech investment programme in 2019 with the blessing of the Central Bank of Oman (CBO).

Oman's second ecosystem includes many support mechanisms, such as Oman Startup Hub – a platform for startups, investors, advisors and entrepreneurs – to connect, collaborate and learn about the innovation ecosystem in the country.

Third, another support mechanism is the Oman Technology Fund (OTF) that aims to put Oman firmly on the map of knowledge leaders in the Middle East. The OTF will effectively work on attracting these types of promising projects to launch their operations in Oman to enhance the knowledge-based economy, and to develop the ICT sector in general. Fourth, Oman recently had a new creation in the Oman Blockchain Society.

Finally, the Central Bank of Oman (CBO) announced the launch of the fintech regulatory sandbox (FRS) initiative at the end of last year. The FRS will enhance competition in the financial sector by allowing participants to better understand the benefits and risks of their fintech solutions, as well as by reducing the time needed to fully offer the solution to the local market. This experience will allow the CBO to introduce agile regulatory frameworks and other strategic initiatives to foster innovation in the Omani financial sector while maintaining financial stability and ensuring high standards for consumer protection.

Despite its infancy, especially compared to its GCC neighbours, its recent commitments to fintech, its wider economic development strategy of Vision 2040 coupled with its developed economy, the country has potential to have a strong fintech ecosystem; why it is considered an emerging fintech hub.

FINTECH FACT Payments, transfers and remittances sectors, as with the wider MENA region, dominate the Omani fintech space. Much development remains in the country though as fintech is still in its infancy in particularly compared to others in the GCC but it is progressing as with previous examples.

IN FOCUS **OMAN STARTUP HUB (OSH)** OSH is a web platform for startups, investors, advisors and entrepreneurs to connect, discover and learn about the innovation ecosystem in Oman. Launched in February 2020, as an ecosystem building initiative of IDO Investments, OSH has flourished into a community of 87 startups, 36 support organisations, 32 advisors and is building a database of ecosystem links to paint a web-like picture of the Omani ecosystem and all the various connections between companies.

Oman has a relatively young and emerging entrepreneurial ecosystem, with potential for growth. Since 2019 governmental institutions have started supporting startups and have created a nurturing environment for startups to flourish. The ecosystem has seen an increase in VC-like deals and funding rounds, and the accelerator and incubator programmes have seen a sharp increase in both participation by startup hopefuls, but also their capacity to accelerate more companies, all while encouraging them to constantly validate and start over if the concept does not work. OSH has launched the first ecosystem report giving a snapshot on activity and growth in 2020 which demonstrates the trends more clearly.

The Central Bank of Oman has recently launched its regulatory sandbox to allow for an increase of opportunity in this field. Prior to this, the regulatory framework was not easy to navigate and there are only a few Omani fintechs currently in operation.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – EARLY (TIER TWO) CATEGORY

5,106,626
Population in millions
GDP per capita
$15,474.032

40%
Enrolled in higher education

70%
Ease of doing business

46.9%
Entrepreneurship

0.81
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

34,044.17
Ratio of tech startups (per person)

150
Number of tech startups

30
Number of VC deals

5
Number of fintech companies

1,021,325.20
Ratio of fintech startups (per person)

In development
Regulatory sandbox

0
Unicorns

13 QATAR

KEY ORGANISATIONS Qatar Central Bank (QCB), Qatar Financial Centre (QFC), Qatar Fintech Hub (QFTH)

OVERVIEW Qatar is one of the richest countries in the world, boosting a strong and developed economy as is like much of its neighbours in the GCC. In particular though, Qatar has the highest GDP per capita in the MEA region. An example of its developed economy is its ranked among the top 10 countries in adopting information and communication technology (ICT), digital skills, flexible work arrangements and a digital legal framework, according to the *World Economic Forum's (WEF) Global Competitiveness Report 2020* – Qatar was the second Arab country in this classification.[290]

As with its neighbouring GCC countries, Qatar is also undergoing economic development and diversification called Qatar National Vision 2030. Its abundance of natural resources, in particular natural gas, has allowed the country to be one of the world's richest but also invest heavily in economic diversification, such as with fintech and digital. With respect to the financial services industry, the Qatar Financial Centre (QFC) is an example of that, where more than 600 companies have made their bases and/or have offices there.

With regards to fintech, a consequent result so far, for instance, has been Qatar Fintech Hub (QFTH), which according to its website: 'QFTH brings together talented entrepreneurs, investors and enablers to develop disruptive technologies so that great visions become reality'. QFTH's programmes were developed by Qatar Development Bank in collaboration with EY to support the growth of local and international fintechs.[291]

Qatar's developments and ability financial to implement its Qatar Vision 2030 has allowed it to continue implementing and developing its fintech ecosystem. It is important and evident that the government has proactively supported fintech as part of wider economic development strategy.[292] Therefore, its highly advanced economy and investments and commitments to fintech and digital makes it an emerging fintech hub.[293]

FINTECH FACT Qatar has a multi-billion-dollar incentives programme to attract international business. Besides partnering with fintech firms across the world, its government is also financing startups at home. It is investing in areas, such as cybersecurity, data analytics and digital access. With fintech, the National Fintech Strategy of the Qatar Central Bank will target opportunities in digital payments, money management and lending.

14 RWANDA

KEY ORGANISATIONS National Bank of Rwanda, Rwanda Fintech Association, Africa Fintech Network, Rwanda Development Board, FinTech Hub

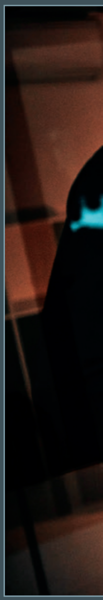
OVERVIEW From its troubled past with a Civil War, the success and transformation of Rwanda is remarkable. Aspiring to be the 'Singapore of Africa', Rwanda has rebuilt its economy and has made an economic transformation in relatively little time and continues to do so. Kigali is the capital and largest city as well as the commercial and financial hub of the country.

Known as Rwanda Vision 2050, the economic development strategy shares similar foundations to others in MEA, such as improving the standard of living for its citizens, digital transformation and a wider diverse and innovative economy. A noticeable milestone of 2050 is that it targets Rwanda to be a 'globally competitive knowledge-based economy'.[294]

In relation to the financial services sector, according to the Rwanda Development Board, the sector has made significant progress and development to convert into a modern one. The Board highlighted that the financial sector overall is stable, profitable, well-capitalised and liquid. The wider ecosystem has a growing and diversified number and types of institutions, a stock exchange, banks, microfinance institutions, savings and credit cooperatives (SACCOs), insurance companies and pension funds.[295]

In terms of total assets from the same source, the banking sector continues to dominate the financial system with banks at 66.1 per cent, followed by the pension, insurance and microfinance with 17 per cent, 9.7 per cent, and 6.4 per cent respectively. In terms of the future growth of the financial services industry in Rwanda, Covid-19 aside, a major example and association in its vision and future has been the Kigali International Financial Centre (KIFC). KIFC is a government initiative that aims to position Rwanda as a major business and financial hub in Africa which among other things involves reforming the financial services.

Rwanda also made its headlines by introducing its own Startup Act to help further spur the development and regulation of the ecosystem.[296]



Wider economic development

12,952,218 Population in millions

GDP per capita **$801.656**

6% Enrolled in higher education

76.5% Ease of doing business

21.5% Entrepreneurship

0.54 Human development index

IN FOCUS **Qatar FinTech Hub**

Qatar FinTech Hub is a global fintech body with the purpose of supporting the development of the fintech industry in the State of Qatar. It works to facilitate collaboration among the participants and stakeholders of the fintech ecosystem and to develop meaningful local and global relationships that will advance its fintech vision. The Qatar FinTech Hub represents a range of stakeholders in the industry from early stage fintech companies to large financial services companies and relevant service providers. To further its aim of developing the fintech industry in Qatar, it also aims to partner with institutions and other associations from Qatar and globally to cooperate on initiatives relating to the fintech industry. Furthermore, it runs an incubator and accelerator programme to aid the development of local and international fintechs within the Qatari market.

The Qatar FinTech Hub began its fintech incubator and accelerator programme in the third quarter of 2020 with participants originally invited to travel to Qatar for the duration of the 12-week initiative. Due to Covid-19 and subsequent travel restrictions, the first wave took part virtually. During this initial application period, QFH received more tthan 750 applications from 72 countries. Only 21 were onboarded into the programme which culminated on 18 January with the demo day. The second wave is set to begin in Q2 of 2021 with a focus on emerging technologies for the financial services industries.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – MIDDLE (TIER TWO) CATEGORY

2,881,053 Population in millions
GDP per capita **$68,793.00**

19% Enrolled in higher education

68.7% Ease of doing business

55% Entrepreneurship

0.85 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

11,166.87 Ratio of tech startups (per person)

258 Number of tech startups

2 Number of VC deals

105 Number of fintech companies

27,438.60 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

In Rwanda, fintech startups have almost tripled in the last five years, from 17 in 2014 to 44 in 2019.[297] Nevertheless, the quick turnaround of the once war-torn country to be a growing regional player in the continent, coupled with its aspirations and prioritisation of economic development, puts it as a market to watch, ranking high in the early-stage fintech hub category.[298]

FINTECH FACT Seventy-five per cent of Rwanda's fintech startups are focused more on 'fin' rather than 'tech', with payments and remittances being the most common category of fintech applications.[299] Despite the high concentration of fintech startups offering payment products and services, demand in other segments, such as insurance or personal finance management, is still lacking. Funding opportunities remain to be a challenge facing startups in the tech community, as is the rest of Africa.

OVERALL FINTECH HUB STATUS:
ONES TO WATCH - (TIER THREE) CATEGORY

Further economic development, tech & fintech specific highlights

47,971.18 Ratio of tech startups (per person)

270 Number of tech startups

522 Number of VC deals

750 Number of fintech companies

294,368.59 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

15 SAUDI ARABIA

KEY ORGANISATIONS Saudi Central Bank (SAMA), Capital Market Authority, Fintech Saudi, SAGIA (Investment promotional agency)

OVERVIEW Saudi Arabia's fintech sector is driven mainly by young first-generation entrepreneurs who are competing with the largest financial institutions in a competitive market. From 2017 until 2019, the value of fintech transactions grew more than 18 per cent each year, where it reached $20billion in 2019. The Kingdom's fintech market is expected to reach transaction values of more than $33billion by 2023.[300] Saudi Arabia is the largest market in the GCC with a young population where 70 per cent are under 30 years old, as well as the largest population . Despite the relative infancy to other neighbouring countries like the UAE and Bahrain, Saudi entrepreneurship is noted with its organic growth. In addition, the country is home to Riyadh, its capital and largest city that aspires to be one of the top 10 largest economies – announced this year by Crown Prince Mohammed bin Salman (MBS)[301] – as well as Jeddah, the country's historic commercial hub.

Saudi Arabia's fintech sector has potential given its large market and efforts with Saudi Vision 2030, where fintech and wider digital transformation is receiving the relevant tools and support to implement it. 2030 has a financial services and fintech implementation that has promoted and allowed for the sector to develop. Some of the examples of the success of it so far include:

- Creation of the catalyst Fintech Saudi that is tasked to promote the sector in the Kingdom
- The Saudi Central Bank (SAMA) launched its regulatory sandbox environment in 2018 that permits both local international fintech firms to test their solutions in the country (26 companies are in sandbox testing)
- SAMA also unveiled the regulations governing the provision of payment services in Saudi Arabia in January 2020, allowing payment service providers or licenced banks to offer payment services and electronic money issuance; this year saw a launch of an instance payment system called 'Sarie'
- AI Strategy was launched by the Saudi Data and Artificial Intelligence Authority (SDAIA)
- Ecosystem catalysts – AstroLabs, an accelerator in the Middle East region, unveiled setupinsaudi.com in September 2020 to help companies set up 100 per cent foreign-owned entity in the Kingdom.[302]
- Overall, Saudi fintech companies have raised $23million the past five years. Saudi has more than 40 business incubators and several accelerator programmes, half of which have some form of government affiliation.
- Saudi Vision 2030 and the Kingdom's continuation of opening up its economy, modernisation and growing local talent pool makes the country a large potential for fintech. This is why, coupled with its strong developed economy, makes it an emerging fintech hub and a highly emerging hub ranking highest in the category.

FINTECH FACT Payments accounted for two-thirds of the market and almost 98 per cent of the userbase. This was followed by personal finance which represented more than 30 per cent of the fintech transaction values. With smart phone payment transactions, in Saudi Arabia this increased by 352 per cent to 19.7 million in April 2020 compared to just 4.4 the previous year.[303]

IN FOCUS Fintech Saudi is an initiative by SAMA in collaboration with the Capital Markets Authority under the Financial Sector Development Programme to support the development of the fintech industry in Saudi Arabia. Fintech Saudi's ambition is to transform Saudi Arabia into an innovative fintech hub with a thriving and responsible fintech ecosystem. Fintech Saudi seeks to achieve this by supporting the development of the infrastructure required for the growth of the fintech industry, building capabilities and talent required by fintech companies and supporting fintech entrepreneurs at every stage of their development.

By launching a number of different initiatives, Fintech Saudi has played a significant role in supporting Saudi Arabia's fintech ecosystem. Initiatives include the Fintech Internship Programme, which has provided more than 130 interns with the opportunity to gain work experience at leading organisations in fintech, in addition to the Fintech Tour 20, the largest cluster of fintech-related events in the region. Fintech Saudi also launched the Fintech Accelerator Programme, an intensive three-month programme providing 10 innovative fintech companies with the tools they need to scale their businesses, and more recently, the Virtual Fintech Careers Fair, which attracted more than 25,000 attendees seeking jobs in fintech.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – HIGH (TIER TWO) CATEGORY

34,813,871 Population in millions

GDP per capita $23,139.799

71% Enrolled in higher education

71.6% Ease of doing business

40.2% Entrepreneurship

0.85 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

36,378.13 Ratio of tech startups (per person)

957 Number of tech startups

89 Number of VC deals

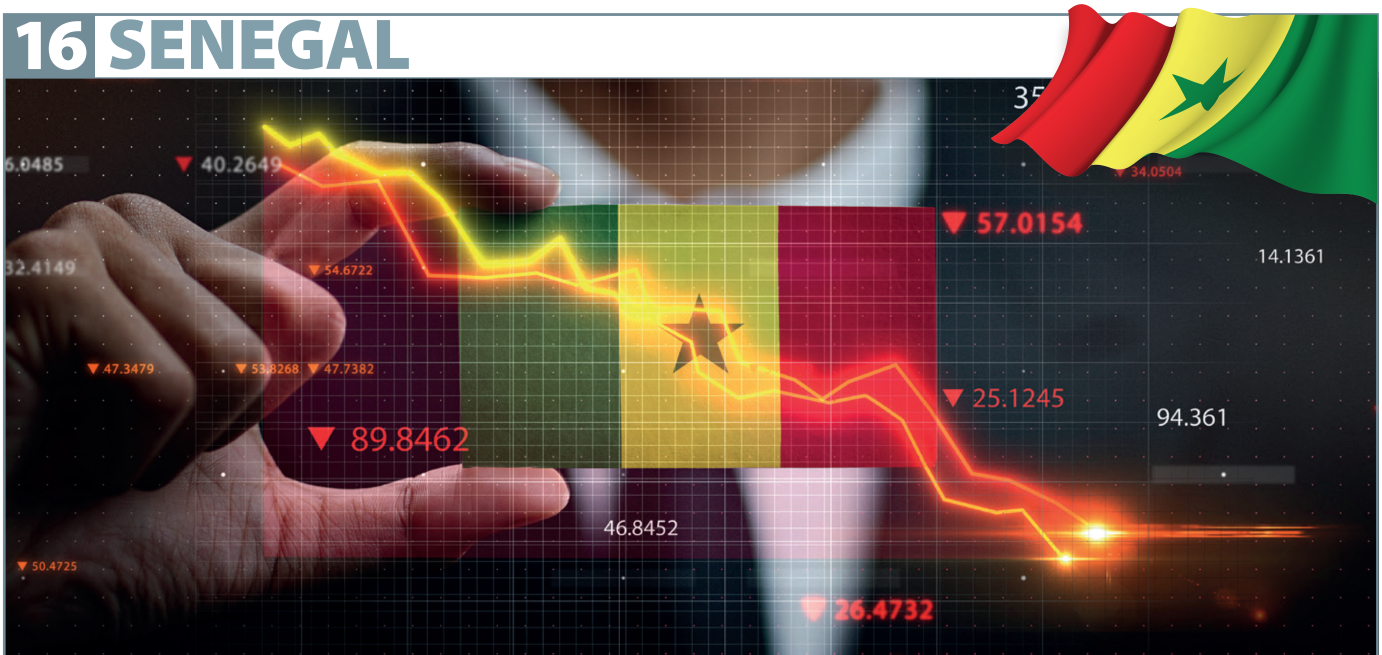
155 Number of fintech companies

224,605.62 Ratio of fintech startups (per person)

Yes Regulatory sandbox

1 Unicorns

16 SENEGAL



16,743,927
Population in millions
GDP per capita
$1,584.5

13%
Enrolled in higher education

59.3%
Ease of doing business

19.2%
Entrepreneurship

0.51
Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

130,811.93
Ratio of tech startups (per person)

128
Number of tech startups

–
Number of VC deals

24
Number of fintech companies

697,663.63
Ratio of fintech startups (per person)

No
Regulatory sandbox

0
Unicorns

KEY ORGANISATIONS Africa Fintech Network, Central Bank of the West African States (BCEAO)

OVERVIEW From the top, the aspiration of Senegal is represented by one vision: 'an emerging Senegal in 2035, with a cohesive society under the rule of law'. The government's strategic guidelines that direct the initiatives needed for translating this vision into tangible actions and results for the benefit of population, are based on three priorities aimed at: bringing about a structural transformation of the economy, promoting human capital and enabling good governance – this is all according to the Presidency of Senegal's website. Economic development strategies and visions drive much of its aspirations and roadmaps to the future.[304]

Senegal is aiming to become a tech hub on the continent. With a growing ecosystem of incubators and funds, the capital Dakar is allowing startups to grow and the government, by 2025, aims to create 35,000 new jobs in the field of technology.[305] Senegal is also uniquely positioned to cater to the Franocphone world.

One of the challenges that fintech startups face in Senegal include regulation. Stakeholders consider the regulatory framework slightly difficult to understand and also have to deal with different players. There is also the issue of funding for fintech startups and the difficulty in building partnerships with the major players.[306]

There were 7.60 million internet users in Senegal in January 2020. The number of internet users in Senegal increased by 205,000 (+2.8 per cent) between 2019 and 2020. Internet penetration in Senegal stood at 46 per cent in January 2020.[307] Meaning there's lots of potential for the fintech ecosystem to grow.

The government of Senegal is supportive and wants to enhance the growth of digital industries and strengthen the entrepreneurial ecosystem, yet fintechs need access to funding and qualified staff.[308]

The ecosystem comprises 24 fintechs and 47 enablers and funding partners. Fintechs can increase financial inclusion through partnerships with incumbent operators by streamlining banks' processes to reduce their costs and by providing them with open application programme interfaces. Yet this would require effective regulation.

One of the challenges that fintech startups face in Senegal include regulation. Stakeholders consider the regulatory framework slightly difficult to understand and also have to deal with different players. There is also the issue of funding for fintech startups and the difficulty in building partnerships with the major players.

FINTECH FACT The country relies, as does much of MEA, heavily on remittances – one of the pillars powering the growth of its fintech industry.[309]

OVERALL FINTECH HUB STATUS:
EARLY-STAGE FINTECH HUB (TIER THREE) CATEGORY

17 SOUTH AFRICA

KEY ORGANISATIONS South African Reserve Bank, Africa Fintech Network, Payments Association of South Africa (PASA)

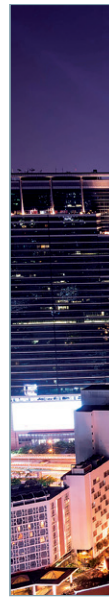
OVERVIEW South Africa is historically a major trade and investment commercial hub for the African continent to do business globally. It is unique in that it has two global cities, Johannesburg and Cape Town.

The largest city in South Africa, Johannesburg, is home to some of Africa's leading banks and financial institutions, such as Standard Bank Group, FirstRand, Absa Group, Nedbank Group and Investec, making it a potential fintech magnet for Africa. It is not only home to the country's primary financial cluster, but has developed an ecosystem where fintech can thrive.

Additionally, South Africa Reserve Bank has overseen several initiatives that have included ProjectKhoka and the InterGovernmental FinTech working group. Johannesburg is fast becoming a magnet for banking for low income customers, financial inclusion fintech and insurance. The city last year had more than 220 programmes offering support to startups. Among the estimated 450 startups in the city, around 30 per cent of those are in the fintech space.[310] As highlighted, this report estimates as a whole South Africa is home to around 200 fintech startups.

Cape Town, South Africa's second largest city, is a big player in the tech industry. The majority of the industry, or some 47 per cent of tech startups, is based in the Western Cape, where Cape Town is located, with Gauteng, where Johannesburg is, in second place at 44 per cent. In addition, Cape Town accounts for 75 per cent of the country's venture capital deals. Of the more than 500 entrepreneurial companies in Cape Town's tech sector, around 20 per cent are in e-commerce and SaaS while 15 per cent are in fintech. The city is also home to Africa's oldest tech incubator, the Cape Innovation and Technology Initiative (CiTi). Cape Town has aninternational pool of talent, growing ecosystem of support, and a relatively low cost of living, helping promote not just fintech but tech in general.[311]

South Africa generally has fintech-friendly rules, where the South African Reserve Bank established the Financial Technology Programme, which aims to assess the emergence of fintech and take into consideration its regulatory implications. The Financial Intelligence Centre, Financial Sector Conduct Authority, National



Wider economic development

59,308,690
Population in millions
GDP per capita
$6,001.401

24%
Enrolled in higher education

67%
Ease of doing business

32.9%
Entrepreneurship

0.71
Human development index

18 TANZANIA

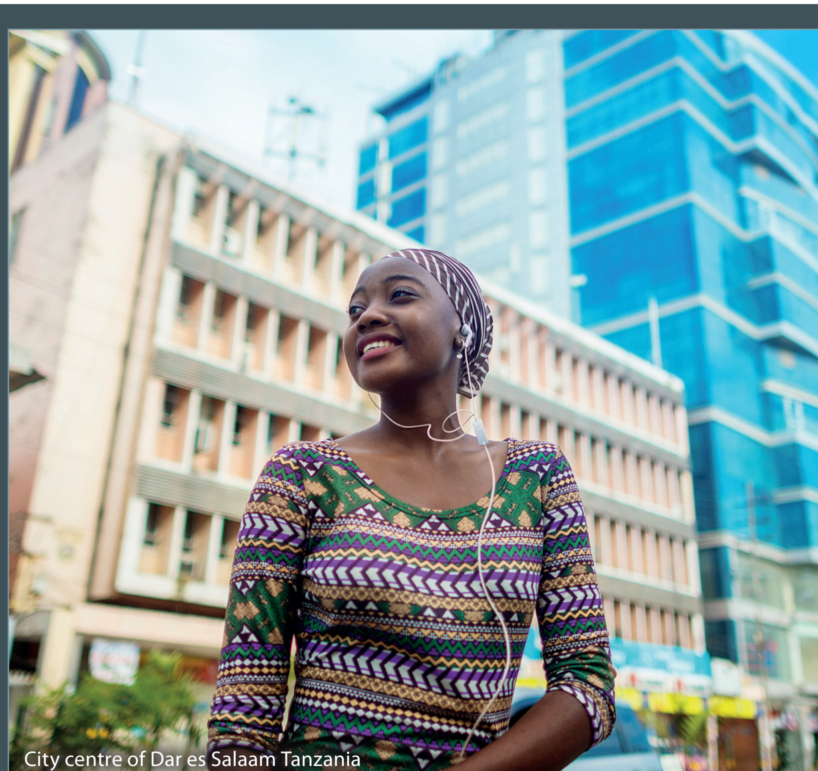
KEY ORGANISATIONS Bank of Tanzania, Africa Fintech Network, Tanzania Startup Association

OVERVIEW Since 2000, Tanzania has implemented its Tanzania Development 2025 with the aim that by 2025 it will become a middle-income economy by addressing its issues to improve infrastructure needs, productivity in agriculture, boost the number of skilled labours and improve the business environment – among others.[317]

The Tanzanian ecosystem, compared to most of the other 22 nations in this report, is still far behind in its fintech ecosystem. However, the market has seen rapid growth in the country over the last few years, partly due to the fact that Tanzanian regulators are actively encouraging the growth and fintech innovation to help increase financial inclusion across the region.

Alhough seen as one of the lowest figures across the continent, three quarters of the Tanzanian population owned a mobile device in 2018, so it makes sense that many of the products and services available are geared towards those with access to devices.[318-319]

There is a lot of potential in the Tanzanian fintech sector, specifically on the mobile money front as the fintech arm leads the transformation and ecosystem.[320] Though many companies and startups are small, Tanzania recorded 19.5



City centre of Dar es Salaam Tanzania

Johannesburg, South Africa

Treasury, South African Revenue Service and the South African Reserve Bank even have released a paper on crypto assets.[312-314]

Due to its historical importance in the African economy from a trade prespective, relatively middle-income economy and large population, South Africa is classified as an emerging fintech hub.

FINTECH FACT The Fintech Scoping in South Africa report found that the bulk of fintech solutions were in payments (30 per cent) and B2B tech support (20 per cent) last year; however, insurtech solutions accounted for nine per cent and financial planning and advisory for seven per cent.[315] The country has very high banking penetration for an emerging market at more than 80 per cent. And extensive card penetration, more than 75 per cent of adult consumers, as a result. These consumers are still underbanked and deal in cash, with only 30 per cent stating they do more than three transactions per month.[316]

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - MIDDLE (TIER TWO) CATEGORY

Further economic development, tech & fintech specific highlights

89,590.17 Ratio of tech startups (per person)

620 Number of tech startups

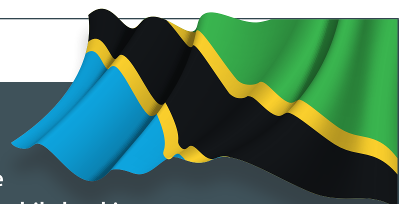
66 Number of VC deals

200 Number of fintech companies

296,543.48 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns



million active users of mobile money payment platforms who together undertook 80.7 million transactions worth $1.43billion in value in 2018.[321]

The Muslim community accounts for almost 50 per cent of the country's population, so it is likely that Islamic finance will see a particular boom in Tanzania to keep up with the demand for Sharia-compliant financial services.

There is however a gap in regulation when it comes to such finance, with the Bank of Tanzania acting as regulator for the financial services including fintechs, so all eyes will be on this space in the near future.

In summary, Tanzania can be categorised as an early-stage fintech hub which, if economic development growth continues, could be an emerging hub for fintech in the future.

FINTECH FACT
The general trend of Tanzanian fintechs is in the paytech space, including mobile banking, mobile lending, money transfers and various digital and mobile payment systems. As with much of East Africa as whole, the region leads globally in mobile banking.[322-323]

IN FOCUS Dar es Salaam is the largest city and commercial hub of Tanzania. It was also the former capital of the country.

OVERALL FINTECH HUB STATUS:
EARLY-STAGE FINTECH HUB (TIER THREE) CATEGORY

59,734,218 Population in millions
GDP per capita **$1,122.122**

3% Enrolled in higher education

54.5% Ease of doing business

16.4% Entrepreneurship

0.53 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

375,686.91 Ratio of tech startups (per person)

159 Number of tech startups

522 Number of VC deals

24 Number of fintech companies

2,488,925.75 Ratio of fintech startups (per person)

No Regulatory sandbox

0 Unicorns

19 TUNISIA

KEY ORGANISATIONS Central Bank of Tunisia (BCT), Africa Fintech Network

OVERVIEW Tunisia has a relatively advanced economy in Africa compared to most of its neighbours. This can be seen from its GDP per capita to other key indicators highlighted in this page. Tunis, its capital and largest city, is its main commercial and financial hub and home to its wider tech and startup ecosystem. With strong links to the Francophone world, due to its history with France, as well as being both African and Middle Eastern, Tunisia is in a unique position to cater to a diverse group of geographies and cultures.

With regards to innovations in the wider tech space, Tunisia's adoption to change and forward thinking is clear. For instance, in April 2018 it was the first African country to pass a Startup Act;[324] subsequently other countries such as Kenya followed suit. The Startup Act was part of the government's broader *Digital Tunisia 2020* strategy to help boost socioeconomic development and expand technological infrastructure.

The country is already known to be generally a strong regional tech hub for Africa, where even in 2017 it was selected as the location for the African Union's planned Digital African Excellence Centre, where digital sector training for government officials and managers in the private sector would be conducted.[325]

In terms of fintech, the Central Bank of Tunisia (BCT) last year announced the official launch of the Regulatory Sandbox. Its aim was to encourage innovation and for a safe environment so that future talented Tunisians do not have to immigrate, as well as attracting foreign investment.[326] This January marked the first cohort of the sandbox with four Tunisian startups selected to participate: Kraoun, Instaclear, Tledger and Sqoin & Coinsence. They would be able to evaluate and verify their fintech solutions in a trial period of nine months.[327]

Given the relatively middle-income and strong economy coupled with its aspirations to grow not only fintech but tech as a whole, Tunisia is an emerging fintech hub.

FINTECH FACT Tunisian startups have tackled challenges in artificial intelligence, cybersecurity and robotics; particularly with Covid-19 fintech has grown as well.[328]

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB - EARLY (TIER TWO) CATEGORY

11,694,719 Population in millions
GDP per capita **$3,317.50**

31% Enrolled in higher education

78% Ease of doing business

42.4% Entrepre-neurship

0.74 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

38,982.40 Ratio of tech startups (per person)

300 Number of tech startups

20 Number of VC deals

16 Number of fintech companies

730,919.94 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns

20 TURKEY

KEY ORGANISATIONS FINTR, Investment Office of Turkey, The Central Bank of the Republic of Turkey

OVERVIEW Turkey has a potential to grow in the fintech world, mainly due to its already innovative banking and payments sector, and strong information technology talent pool. Istanbul is also a large financial hub not just for Turkey but with its population of more than 15 million people historically – past and present – it has been a bridge between Europe, Asia and the Middle East.

Three out of 10 Turkish people still do not have bank accounts but nearly everyone has a mobile phone – even back in 2018 smart phone usage was at 77 per cent, according to a report, which also highlighted growth across fintech – from digital access to the banking system to digital payments to name a few. Finally, among the 1,000 startups that are active in the country, nearly one-fifths of them are fintech companies. Other overviews of Turkey include:

- **Economy in 2020** – The Turkish Lira has dropped recently, compared to major currencies, such as the US dollar, and potentially this can be a strong attraction to investors including fintech
- **Central Bank and payments** - The Central Bank of the Republic of Turkey (Türkiye Cumhuriyeti Merkez Bankası) has been authorised to oversee payment companies and electronic money companies from 1 January 2020,[329] paving way for legislative support and potential open banking opportunities in the future in Turkey
- **Istanbul Finance Centre Project** – the ambitious plan for a new international financial centre in Istanbul[330] has made progress and completion should be done soon (initially reported for 2022). Istanbul aims to be the top 20 financial centres of the world through this.[331-333]

The large market, talent pool and current and past importance particularly of Istanbul linking East and West shows the potential for fintech to thrive. With the government's infrastructure support, changes in law – more potentially is expected to support fintech. This is why overall the country is an emerging fintech hub in MEA.

FINTECH FACT Over the past decade, several fintech companies have emerged in verticals of payments/cards, e-money and wallets focusing on consumers, and point-of-sale (POS) payments, invoice/budget management targeting small businesses. Key sectors leading the global fintech growth are still underdeveloped mainly due to regulatory restrictions and this also applies to Turkey.

Among these are challenger neo-bank industry, consumer finance, P2P lending, crowdfunding and insurtech. Traditional banks in Turkey are also extremely powerful, and lead the fintech growth by acting as VCs or creating fintech solutions within their own range of product and services. In short, the fintech growth continues but will always be limited as long as strict regulations in the banking industry remain.[334]

IN FOCUS **Fintech Association Turkey (FINTR)** The main goal of the Fintech Association Turkey (FINTR) is to contribute to the development of financial innovation and financial technology industry locally and globally. FINTR works on the spread of innovation and advanced technology solutions in banking, insurance, capital markets, payment services and other financial sectors.

In doing so, it embarks on increasing the number of innovative solutions and startups, developing partnerships and fostering the ecosystem. Its mission as a non-profit entity is to curate the fintech ecosystem by increasing the number of innovative solutions and startups, enabling their expansion towards global markets, facilitating the emergence of global brands in the fintech industry, and supporting open innovation programs by traditional financial institutions. Along the same lines, it aims to strengthen Istanbul's role towards financial services and technologies.

"We envision positioning Istanbul and Turkey in EMEA (Europe-Middle East-Africa) as a global centre of attraction and meeting point towards fintech services. Our vision pertains to creating a global innovation ecosystem for entrepreneurs from around the world," the Association states.

OVERALL FINTECH HUB STATUS:
EMERGING FINTECH HUB – HIGH (TIER TWO) CATEGORY

84,339,067 Population in millions
GDP per capita **$9,042.493**

33% Enrolled in higher education

76.8% Ease of doing business

44.5% Entrepreneurship

0.82 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

84,339.07 Ratio of tech startups (per person)

1,000 Number of tech startups

94 Number of VC deals

200 Number of fintech companies

421,695.34 Ratio of fintech startups (per person)

In development Regulatory sandbox

0 Unicorns

21 UGANDA

KEY ORGANISATIONS Africa Fintech Network, Bank of Uganda (BoU), Fitspa – Financial Technology Service Providers' Association, Fintech Association of Uganda, Financial Sector Deepening Uganda (FSDU)

OVERVIEW In terms of wider economic development, Uganda has Uganda Vision 2040. In 2007, the Ugandan Cabinet approved the national vision Statement: 'A transformed Ugandan society from a peasant to a modern and prosperous country within 30 years'. Similar to other countries, its priority to upskill its human capacity, build infrastructure – to name a few – are key points in the national economic development strategy.[335]

Continued digitalisation in MEA is key to advancing financial inclusion. This is especially relevant in regions, such as East Africa, where IMF research found that even where financial inclusion through traditional banking services was declining, expanded access to digital tools and services increased financial inclusion. This trend is set to continue in 2021, especially in the more digitally advanced economies, such as Ghana, Kenya and Uganda.[336]

Uganda's real gross domestic product growth this year is projected to hover below two per cent compared with almost 5.6 per cent in 2019 due to Covid-19, according to the World Bank. As part of its response to the pandemic's economic fallout, the Ugandan government is at the forefront of promoting e-commerce and digital solutions for faster recovery from the crisis.[337]

Uganda is also improving trust in online transactions. Last year, it enacted a data protection and privacy law to enhance the security of these transactions. An e-payments law recently approved by the country's parliament is expected to come into effect soon to level the playing field for providers.[338]

Uganda has seen a boom in e-payment solutions in recent years. Between 2015 and 2019, mobile money transactions in Uganda more than doubled in value, from about $9billion to $20billion, according to the country's central bank. Covid-19 has amplified the uptake of e-payments and growth of local fintech solutions.

Wider economic development

45,741,007
Population in millions

GDP per capita
$776.769

5%
Enrolled in higher education

60%
Ease of doing business

12.9%
Entrepreneurship

0.54
Human development index

22 UNITED ARAB EMIRATES (UAE)

KEY ORGANISATIONS Dubai International Financial Centre (DIFC), Abu Dhabi Global Market (AGDM), DIFC Fintech Hive, Hub 71, Dubai FDI, Abu Dhabi Investment Office (ADIO), Central Bank of the UAE (CBUAE)

OVERVIEW The UAE is a highly developed economy, home to global hubs of Dubai and Abu Dhabi. The UAE's National Vision 2021, which calls for the country to become the economic and commercial capital for two billion people by 'transitioning to a knowledge-based economy' and becoming 'among the best in the world in entrepreneurship' shows its commitment to wider digital transformation. In terms of digital competitiveness, the UAE is ranked first in the Arab region (13th globally), according to IMD's *World Digital Competitiveness Ranking 2020 Report*.

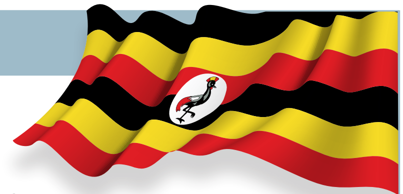
Within each of the UAE's seven Emirates there are visible implementations of those as well. In Dubai, there is Smart Dubai 2021 with a roadmap for it to become a world-leading city by 2021 – 'in celebration of the nation's golden jubilee, by promoting technological advances that benefit the city's people; it's economy; and its resources'.

Two leading UAE financial free zones, Abu Dhabi Global Market and Dubai International Financial Centre are the key flagship examples of the UAE's financial services and fintech success.[342] According to the World Bank, it is the easiest place to do business in MEA. In addition, it is the third highest country in MEA (after Israel and Nigeria) with the most number of techs and the second highest per capita after Israel.

As a result of the country's advanced economy from an economic development context, coupled with its strong and growing ecosystem for region, in particular with Dubai and increasingly Abu Dhabi being a hub for the region for it, its status as a premier global fintech hub is evident. National and local strategies combined with the growing innovation in the UAE will help the already undisputed leader in fintech and wider hub for the region also gain its presence and prestige among the global players.

FINTECH FACT The UAE drives remittances because of its largely expatriate population, forming around 90 per cent of the country's total population, coupled with its hub status. [343] Blockchain has also been an important subsector in the UAE as well as cryptocurrencies. Islamic Finance fintech has grown and the UAE now has the third largest number of Sharia compliant fintechs after Malaysia and the UK. The economy grew to be an undisputed regional hub in particular with Dubai, which is home to two-thirds of the Fortune 500 companies' MEA regional offices; fintech is a reflection of its wider economic development.[344] It is home to at least 400 fintechs, which is the second largest in MEA after Israel.

IN FOCUS Dubai, the largest city in the United Arab Emirates (UAE), is not only the country's financial and commercial hub but



Digital financial solutions have been expanding access and reach to consumers, especially the unbanked and under-banked.[339] Its aspirations, growing economy and prioritisation of sectors, despite it newer compared to other parts of MEA, puts it as a market to watch in the early-stage hub category.

FINTECH FACT A story stemming out of the continued need for fintech solutions despite the pandemic was in Uganda with SafeBoda, a motorcycle ('bodaboda') taxi-hailing app that recently launched an e-commerce platform by connecting market vendors with customers, a result of Uganda going on lockdown.[340]

IN FOCUS **Financial Technology Service Providers' Association (FITSPA)** is an independent, nonprofit, membership-based association representing Uganda's local and global fintech community. FITSPA aims to support the development of Uganda as a leading fintech destination by increasing access to affordable financial services through ICT and promoting financial inclusion for economic prosperity for all.

According to Peter Kawumi, chairman board of directors at FITSPA: "FITSPA is playing a vital role in the building of the fintech industry in Uganda by supporting the development of a robust fintech ecosystem for Uganda through partnerships with both local and international stakeholders, and by making strides in the important areas of fintech regulation".

While Gerald Begumisa, vice-chair board of directors FITSPA, said: "We are witnessing the re-writing of banking in Uganda and the re-arrangement of financial services around the consumer, powered by fiintech. The best financial services are going to be in real-time based on customer behaviour using the principles of mobility and AI and FITSPA is at the helm of this revolution."

OVERALL FINTECH HUB STATUS:
ONES TO WATCH (TIER THREE) CATEGORY

Further economic development, tech & fintech specific highlights

273,898.25 Ratio of tech startups (per person)

167 Number of tech startups

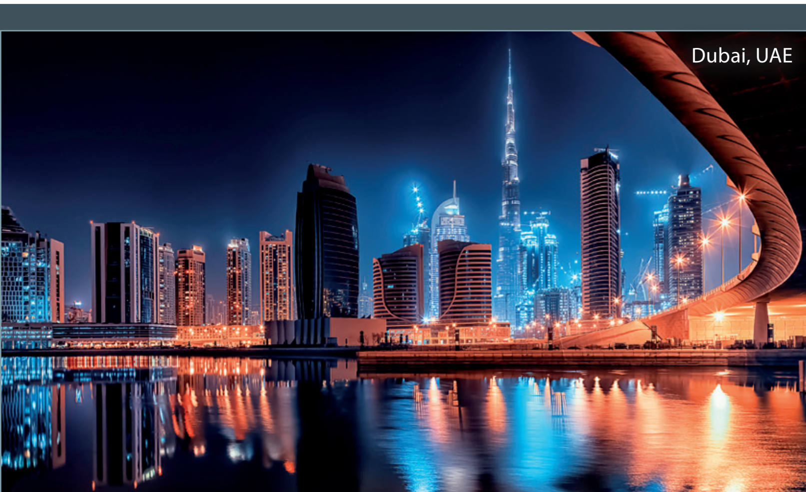
4 Number of VC deals

70 Number of fintech companies

653,442.96 Ratio of fintech startups (per person)

Yes Regulatory sandbox

0 Unicorns



Dubai, UAE

has also become one for both the Middle East region and beyond. In fact, Dubai's humble beginnings have, at present, secured a seat in the global stage as a global hub. The crown jewel in Dubai's wider financial services success and global hub status in the global economy is the Dubai International Financial Centre.

The capital of the UAE, Abu Dhabi, has been building its financial services ecosystem in which fintech plays a large role. The clearest example of its growing reputation as a hub in the region and beyond is ADGM, the city's international financial centre and free zone.

OVERALL FINTECH HUB STATUS:
PREMIER GLOBAL HUB (TIER ONE) CATEGORY

9,890,535 Population in millions

GDP per capita **$43,103.323**

37% Enrolled in higher education

80.9% Ease of doing business

53.5% Entrepreneurship

0.89 Human development index

Wider economic development

Further economic development, tech & fintech specific highlights

4,300.17 Ratio of tech startups (per person)

2,300 Number of tech startups

129 Number of VC deals

400 Number of fintech companies

24,726.01 Ratio of fintech startups (per person)

Yes Regulatory sandbox

1 (Emerging Markets Prop. Group) Unicorns

c. Findings: Premier, emerging and early stage

The scoring mechanism used to categorise visible fintech countries in MEA appears to endorse previous considerations. What has been helpful through this process, in particular for those not familiar at all with MEA's fintech space, is the opportunity to provide an overview of the key player hubs in the region by categorising them into three tiers.

In addition, in line with previous research studies and reports – including MENA only or together with Africa – a comprehensive MEA-wide analysis seems to align for the most part (See Table below). Results based on the following methodology (a summary of the data can be found in the appendix). The following will reflect each of those categories:

PREMIER FINTECH COUNTRY HUBS IN MEA: ISRAEL AND THE UAE

In the methodology for the validation research, the two countries with the overall economic development, digital and wider tech and fintech-specific categories scored a seven or higher. So, what exactly determines a premier global category?

It is not surprising that both nations have received this distinction. From an economic development aspect, both countries are highly-developed, as seen from high GDP per capitas all the way to high HDI indices. With respect to tech and digital as a whole, both nations are highly advanced in terms of digital infrastructure and also wider tech ecosystem. For Israel, its 'startup nation' nickname showcases that.

The UAE's aspirations from its leaders have cascaded down to create an economy that has developed so fast in a short amount of time. This is clear with Dubai as well as Abu Dhabi. Particularly with the former; the city with its humble roots as a small fishing village has established itself not only as a regional hub in MEA but even a global hub contender. The growth of Dubai International Airport to be the world's busiest international and Dubai as the number one city for regional MEA operations – of the top 500 companies globally for the two-thirds that have offices in MEA, 138 of them have established that in Dubai (beating runner up Johannesburg which had shy of 60).[344]

With respect to fintech, both countries for the most part demonstrate their strengths. In the context of Israel, much of the data suggests that much of its strengths appear to be driven organically. It is the country in MEA, despite its size, with the most number of fintechs (as well as tech companies). In the UAE, its strengths appear both with strong government support as well as organically. With the former, various national and Emirate-specific strategies highlight ambitions – such as aiming to be a leading global smartcity and blockchain and wider digital leader to name a few. The country has the region's second largest number of fintechs as well as tech companies. Similar to its standing for MEA operations, in terms of MENA half of the fintech companies in the region are also in Dubai specifically.[345]

	WIDER ECONOMIC DEVELOPMENT (ED)				DIGITAL & TECH				FINTECH (FT)				
COUNTRY	ED TOTAL	VALUE	ED AVG	ED 50	D & T	VALUE	D&T AVG	DT 20	ED TOTAL	VALUE	FT AVG	FT 30	TOTAL WEIGHT SCORE
UAE	44	6	7.33	2.93	29	3	9.67	1.93	39	5	7.8	2.34	7.207
Saudi Arabia	44	6	7.33	2.93	23	3	7.67	1.53	30	5	6	1.8	6.267
Bahrain	41	6	6.83	2.73	16	3	5.33	1.07	23	5	4.6	1.38	5.180
Israel	47	6	7.83	3.13	30	3	10.00	2.00	37	5	7.4	2.22	7.353
Turkey	42	6	7.00	2.80	21	3	7.00	1.40	15	5	3	0.9	5.100
Egypt	34	6	5.67	2.27	9	3	3.00	0.60	23	5	4.6	1.38	4.247
Morocco	30	6	5.00	2.00	6	3	2.00	0.40	2	5	0.4	0.12	2.520
Nigeria	25	6	4.17	1.67	19	3	6.33	1.27	27	5	5.4	1.62	4.553
South Africa	33	6	5.50	2.20	17	3	5.67	1.13	20	5	4	1.2	4.533
Kenya	26	6	4.33	1.73	17	3	5.67	1.13	18	5	3.6	1.08	3.947
Lebanon	31	6	5.17	2.07	12	3	4.00	0.80	8	5	1.6	0.48	3.347
Ghana	25	6	4.17	1.67	13	3	4.33	0.87	12	5	2.4	0.72	3.253
Rwanda	21	6	3.50	1.40	9	3	3.00	0.60	16	5	3.2	0.96	2.960
Kuwait	41	6	6.83	2.73	10	3	3.33	0.67	18	5	3.6	1.08	4.480
Qatar	42	6	7.00	2.80	11	3	3.67	0.73	20	5	4	1.2	4.733
Tanzania	20	6	3.33	1.33	2	3	0.67	0.13	2	5	0.4	0.12	1.587
Oman	38	6	6.33	2.53	13	3	4.33	0.87	9	5	1.8	0.54	3.940
Uganda	20	6	3.33	1.33	3	3	1.00	0.20	13	5	2.6	0.78	2.313
Senegal	20	6	3.33	1.33	9	3	3.00	0.60	1	5	0.2	0.06	1.993
Mauritius	30	5	6.00	2.40	9	3	3.00	0.60	20	5	4	1.2	4.200
Jordan	34	6	5.67	2.27	16	3	5.33	1.07	12	5	2.4	0.72	4.053
Tunisia	31	6	5.17	2.07	12	3	4.00	0.80	12	5	2.4	0.72	3.587

Research compiled by *The Fintech Times*. Value refers to number of indicators in the country profiles that were available. Average (avg) were their average scores and the final ED50, DT 30 and FT 30 were their total scores, later all added for the 'Total Weight Score'.

The commitment to grow the wider financial services and economic ecosystem, where fintech plays a strong part of, can be seem visibly with the UAE's two leading financial centres – Dubai's DIFC and Abu Dhabi's ADGM. DIFC is the leading global financial centre in the Middle East, Africa and South Asia (MEASA) region with a vision to drive the future of finance. It is in fact the only one from MEASA in the world's top 10 leading financial centres, ranking in at eighth place, joining other financial hubs, such as London, Singapore, Hong Kong and New York City, according to the Global Financial Centre's Index. It is also home to DIFC FinTech Hive, a major fintech accelerator. DIFC is home to more than 50 per cent of fintech businesses in the GCC.[346-347]

In terms of Israel, despite not only having the highest number of both startups and fintechs in MEA, it has produced innovations that MEA (outside of its region) is still at its infancy. In other words, the Israelis have produced fintech solutions and innovations that have global reach – companies, such as unicorns Payoneer, Rapyd, Lemonade, Fiverr and eToro, have Israeli roots.[348] The country in the wider fintech ecosystem that encompasses the likes of cybersecurity and AI also show strong Israeli innovation. Due to the size of the country, political issues and other factors, the country has historically had to look abroad and ahead. This is why, in this context fintech and wider tech, they lead not only in MEA but are key players on a global stage.

EMERGING FINTECH HUBS:

High Emerging: Saudi Arabia, Bahrain and Turkey (Scores of 5-6.99)
Middle Emerging: Qatar, South Africa, Nigeria, Kuwait, Mauritius, Egypt, Jordan (Scores of 4-4.99)
Early Emerging: Early Emerging: Kenya, Oman, Tunisia, Lebanon, Ghana (Scores of 3-3.99)

The Emerging Fintech Hubs category consists of all the GCC nations (minus the UAE), the four large African nations of Egypt, Nigeria, Kenya and South Africa and the small island nation of Mauritius as well as Turkey, Jordan, Tunisia and Lebanon. It is worth noting that in particular, the countries of Saudi Arabia, Bahrain, Qatar, Kuwait, South Africa and Turkey scored in the top half (scores from 5.5-6.9 – Saudi Arabia scoring the highest with Bahrain in second). The following countries that scored as emerging did so for similar themes among all of them.

For an economic development perspective, all the countries here are different in terms of their economies. However, what separated them from early-stage economies are that all the emerging fintech hub countries are either at least middle-income countries or high-income economies. It would be difficult to create an ecosystem for fintech if the wider economic development environment was not at least fairly established.

This has been reflected on their GDPs as well as various levels of other indicators used to confirm that. Some of that includes the HDI index, where all of them had fairly high scores. Another point to address with the emerging countries has been the size of some of them – particularly with countries like Nigeria whose population is 200 million people and Egypt with 100 million. Their large populations overall put their economies at least relatively more developed compared to their other African counterparts. For the countries that are small in terms of their size and population, notably Bahrain and Mauritius, the economic development indicators still show their strengths (high GDPs per capita – Mauritius has highlighted is one of the highest in Africa). The two countries, as seen later with the tech and digital and fintech-specific, despite their small sizes do possess strong ecosystems.

From a digital and wider tech point of view, each of the countries in this category show a reflection of their economic development advancements. For instance, often referenced together as the four in Africa from various research including that as well of *The Fintech Times* – Egypt, Kenya, Nigeria and South Africa, their strong showing here compared to their other fellow neighbours is evident. The four of them collectively have 85 per cent of Africa's total fintech investments in 2019 and 82 per cent last year.[349] Ghana also made the emerging category as well in this research.

With respect to the GCC members, their advanced economies and relatively growing tech and wider digital ecosystems justify their showing based on the research's findings. For instance, Qatar is one of the world's richest countries and this has allowed them to be able to build a growing tech, digital and fintech ecosystem. This is evident with their growing Qatar Fintech Hub and other infrastructure to foster it.

Neighbouring Saudi Arabia, which scored the highest here in the emerging category, is also an example of how their aspirations and advanced economies is being reflected in wider tech and fintech specifically. Being the largest economy in the GCC, the 35 million people population is undergoing massive economic development reforms and their indicators – from VC funding to even the number of fintechs – shows that.[350-351]

Source: *The Fintech Times* and various; prefilteration (due to nearly 70 countries in MEA) was done based on available data and expert opinion. Later the chosen countries about were scored through three wider indicator themes (wider economic development, digital and wider tech, and fintech-specific).
Premier fintech hub (tier one) – leading hubs in MEA for fintech as a whole; plays strong impact globally; stable and sophisticated fintech landscape
Emerging fintech hub (tier two) – strong commitment and desire to further solidify their fintech ecosystem; strong investments either at government level or organically is underway
Early-Stage fintech hub (tier three) – overall infancy in fintech ecosystem yet for those in the higher ranking (ones to watch-top scorers) show potential to be in the emerging category one day

With Bahrain, the country received the second highest score in the emerging category and it is worth noting their initiatives and aspirations. They were the first in the region to have an onshore regulatory sandbox as well as rules on open banking. In addition, being the first country to diversify their economy in the GCC has been adopted through their own strategies in the GCC. The region's historic reliance of oil is no longer being felt and tech and fintech are key ways to change that. To note – Turkey – with its large young and educated population and strong financial services hub of Istanbul also showcases why the country also is considered an emerging fintech hub.

In summary, the emerging fintech hubs category have all demonstrated some of the key following characteristics based on the research's findings:

- Advanced or relatively advanced economies based on a wide range of economic indicators such as GDP and HDI
- Their wider tech scene may not be as advanced as the leaders in MEA (the premier categories – Israel and the UAE) but there are clear advancements via evident deals around tech – VC deals and the number of tech startups
- There is either a strong or in development fintech infrastructure such as with regulatory sandboxes in the respective country
- There is a sizeable number of fintechs (both as a total but divided by its population) as well as a startup scene and wider entrepreneurial activity

With Lebanon, the country that scored the lowest in the emerging category, the economy has been a historical financial hub in the Middle East region. The challenge is that the country is experiencing various economic and political challenges that, had this study been done in the past, the country most likely would have ranked higher in the study. Therefore, the result is assumed on would most likely decline from its past. For it to score better in the future in this study and maintain its emerging status it will need to see wider economic recovery, both with its challenge pre-and during Covid.

THE REST OF MEA: EARLY-STAGE

Early-Stage 'ones to watch – top scorers' (Tier Three): Rwanda, Morocco and Uganda (all scored at least between 2-2.99)
Early-Stage (rest of MEA) Examples include: Senegal and Tanzania (countries in the study that had scores from 0-1.99)

For this report, as highlighted, a sample of 22 countries were chosen via the prefilteration. Within the 22 countries, those that did not make the premier and emerging market ranking would be considered early stage fintech hubs. Also, those countries that did not make the prefilteration list, which are the majority of MEA countries, would also be early-stage fintech hubs.

The criteria used for this MEA report guide highlighted the importance of economic development, digital and wider tech and fintech-specific indicators. It is clear that the countries sampled that did not make the list of premier nor emerging (Uganda, Senegal, Tanzania, Rwanda, Morocco) do have the potential to do so one day. The countries were chosen based on previous data in terms of their activities in fintech. However, the findings of the research did show that the emerging and premier were decided based on the scoring mechanism that those in the early stage category did not make at this time. For those countries that were not selected in the sample of 22, as mentioned, they would also fall in the early-stage category, albeit most likely at lower scores than the ones highlighted here.

Based on coverage from the launch of the new MEA section of *The Fintech Times* coupled with the research and information out in public, the countries highlighted that fell in the early-stage category have overall shown growth, interest and various degrees of commitment in growing their sectors.

For the novice in MEA, as well as those who are more familiar with the market, when presented with summarising it is clear that the economies in Africa (combination as seen from their sizes, relatively more advanced economic development and ecosystems in fintech) of Nigeria, South Africa, Kenya and Egypt made the emerging category. The only exception from the study were Tunisia and Mauritius, which the latter – despite its size – is one of the richest African countries based on GDP per capita highlighted earlier in the report.

COUNTRIES TO WATCH: RWANDA, MOROCCO AND UGANDA

The countries highlighted should be commended for the work they have done in the general short time fintech has become a growing sector. For instance, the countries that scored in the higher end (2.0 to 2.99) were Rwanda, Morocco and Uganda.

Rwanda has made significant steps in boosting fintech and wider economic development, remarketing with Rwanda who many might forget had suffered its own economic and political challenges. Therefore it is remarkable to see the economy transform to be known as the 'Singapore of Africa'.[352] Despite both economies being much smaller than their neighbours, such as Nigeria or Kenya, their commitment to fintech and wider digital will most likely see a stronger showing for any future research done here, where its entry as an emerging hub will be a matter of not if but when. In addition, Morocco and Uganda also have a growing fintech ecosystem as well and have that opportunity to grow into emerging soon.

In summary, the section summarises based on its own research with available data from the public through its ranking based on wider economic development, digital and wider tech, and fintech-specific indicators that there are clear hubs in MEA for fintech. From the novice to the more knowledgeable of the region, the research is nothing new but gives the reader a guide of the key hubs based on relevant data and filteration that incorporates elements of work previously done but putting it into a wider economic development context.

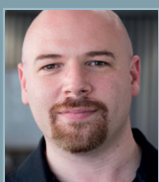
Economic development and diversification has played such a huge role and that could not be more clearer than in MEA. Whether it be through wider government strategies, such as in the GCC and in parts of Africa, to more organic growth such as in Israel, this report guide highlights that the fintech activity seen today is a direct and indirect consequence of the wider economy.

Therefore, in terms of premier fintech hubs in the region those would be both Israel and the United Arab Emirates. In terms of emerging fintech hubs they would be Saudi Arabia, Bahrain, Qatar, Kuwait, South Africa, Turkey, Egypt, Nigeria and Kenya). The rest of MEA would be early-stage fintech hubs but key ones to watch would be Ghana, Rwanda and Lebanon.

The fintech ecosystem

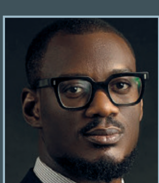
The fintech ecosystem is not just about fintechs: players that are pivotal in boosting the efforts of the sector

TalentintheCloud offers specialist leadership executive search services across emerging markets. It helps business leaders hire senior and middle management leaders across the fintech industry. Headquartered in Mauritius with operating companies in Cape Town, South Africa and London, UK.



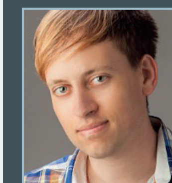
Darren Franks, the founder and CEO, says: "Consider the talent acquisition and growth challenges on a continent the size of China, India, Europe, the US and Japan combined, and where the talent pool speaks an estimated 1500-2000 languages across 54 countries. Along with a specialist skills deficit in a rapidly changing business landscape, the continent presents an incredibly challenging environment for fintechs of all sizes. They need more than just software development skills to succeed. Our deep understanding of the sector and unique digitised solutions attract, engage and develop diverse, business transforming talent. Importantly, our specialist practice has a fundamental focus on assisting women leaders to harness their careers and ensure they are treated as equal. Our mission is to significantly increase the number of women leaders across the African fintech sector. With 42 per cent of our leadership placements since our inception being women, we're seeing progress."

Big Cabal Media/TechCabal is a futured-focused publication, fully owned by leading African media company Big Cabal Media, that leads clear and compelling conversations on the impact and business of tech in Africa. Its data analytics, research and consulting service, TC Insights, provides actionable intelligence about fintech and other sectors in Africa's technology industry to big tech companies, investors, entrepreneurs, regulators and other players on and off the continent. Headquartered in Lagos, Nigeria.



Tomiwa Aladekomo, CEO, **Big Cabal Media,** says: "Fintech in Africa has seen significant growth over the past few years with the sector producing one of the continent's unicorns (Interswitch) and a major acquisition (Paystack) by US-global payment giant Stripe. We expect to see more growth in the sector this year despite the ongoing pandemic. Our job as an organisation is to continue to help people on and off the continent to understand the potential of the sector and how to participate in its success. Our research and consulting service provides answers to specific questions that big tech companies, investors, entrepreneurs, regulators and other players have so that they can make informed decisions."

Fintech Nations is an initiative started by Nir Kouris and Jon Kingsley, together with global fintech partners, startups, scaleups and established companies from Israel and other fintech leaders around the world. The goal of the summit is to bring world leaders and upstarts in the fintech world together to join forces, produce innovative solutions and nurture the future of fintech. Based in Tel Aviv



Co-founder **Nir Kouris** says: "Our goal is to make new fintech bridges among the fintech nations via our community and platform of summits all about matchmaking and helping banks, fintechs, payments and financial service providers to connect and collaborate.

This year fintech nations will launch a new brand called Coin Nations Summit that will be all about crypto, blockchain and new financial opportunities in digital currencies and assets."

Andra Public Relations is a communications firm with a niche focus on financial technology and other specialised sectors. The Bahrain-based firm, established in 2019 to cater to both startups and corporations, aims to increase awareness of the Bahrain fintech ecosystem by creating strategic campaigns for innovative firms in the country and within MENA. It has worked with more than 30 clients within the technology, fintech and governmental space highlighting payment services, open banking, cryptocurrencies and digital transformation. In addition, it has partnered with several regional and global platforms to support dedicated initiatives and platforms that add value to the thriving fintech sector. Its vision is to not only create campaigns that highlight Bahrain and MENA's innovative fintech solutions but act as ecosystem builders for the future in line with the Kingdom's vision.

"Under Andra PR's umbrella, we have launched our very own Fintech Series that has hosted corporates and startups from Bahrain's fintech space and MENA. The monthly event focuses on various innovations and themes that will shape different industries and sectors within the region. This includes a special focus on developments in regtech, money transfer and blockchain. In 2019, we hosted the Fintech Series in the Capital Club Bahrain and in 2020, virtually with Brinc Batelco. We've hosted six so far with more than 30 local and international speakers and 500-plus attendees. The seventh virtual episode has officially launched with an edtech focus powered by Lumofy; an award-winning Bahrain-based startup," says CEO **Fatema Ebrahim.**

iii. Fintech predictions for 2021 and expanding on MEA's fintech ecosystem

The report has showcased the wider MEA fintech landscape, giving mainly the novice reader, as well as those more familiar with the region, an overview and guide of the key components of the fintech ecosystem in a territory that covers more than 1.7 billion people across the earth.

The final section of this report will focus on two elements:

- **Fintech predictions in MEA for 2021** – where does fintech lie for this year in the Middle East and Africa region following the effects of 2020?
- **Expanding on MEA's fintech ecosystem: moving forward** – what are key components for MEA to further develop its ecosystem?

I. FINTECH PREDICTIONS IN MEA FOR 2021: ECONOMIC DEVELOPMENT, TECH/DIGITAL AND FINTECH-SPECIFIC

The report's country methodology has highlighted three key themes in a comprehensive economic ecosystem:

1. **Economic development** – fintech is part of the wider economy (not unique to MEA). Therefore, key economic development and wider economic factors will determine aspects of the economy, which can directly and indirectly include fintech
2. **Tech and wider digital** – any developments in the tech and wider digital space will play various levels of impact on the fintech sector
3. **Fintech-specific** – fintech targeted points would change the sector

1. ECONOMIC DEVELOPMENT

In this coming year (and beyond), there are opportunities and challenges that are either unique to the region or also impact the wider global economy.

ECONOMIC DEVELOPMENT STRATEGIES WILL CONTINUE TO BE IMPLEMENTED DESPITE COVID-19 IN MUCH OF THE MIDDLE EAST AND PARTS OF AFRICA

In the Middle East, the wider economic development strategies in the GCC and beyond will continue to accelerate. Diversification is playing a key role across much of the Middle East, in particular within the GCC. 2021 will see much of that continue, as it marks a decade left in terms of milestones for many, such as in Saudi Arabia with Saudi Vision 2030 or Bahrain with Bahrain Economic Vision 2030, to further foster the strategies that will embrace and promote innovation in the fintech ecosystem and wider economy.

Infrastructure, both physical and digital, will continue to evolve to help support the various economic development strategies. For instance, countries like the UAE – known as a leader in digital transformation in not just the Arab World but also globally – will further advance here. Leaders in fintech and wider financial services in the Middle East, such as Bahrain, the UAE (both Dubai and Abu Dhabi) and Israel, will most likely continue innovating and fostering their respective ecosystems.

This year will most likely see further regulatory frameworks, sandboxes, blockchain and cryptocurrency projects and other initiatives to promote fintech's infrastructure ecosystem. In 2020 exciting news came in droves – from Oman's sandbox with the Oman Central Bank (OCB) to Saudi Arabia's big data and AI strategy to the UAE Central Bank's new fintech office to Egypt's new banking laws. This year we can expect more announcements and developments, such as Turkey's *Istanbul Finance Centre Project* or maybe even a national AI strategy for Israel.[353]

Despite Covid-19, there are also positive outlooks for the African continent for economic development to continue in 2021. National economic development strategies, which aim generally to boost growth and job creation, have been ongoing despite the challenges of the pandemic and this looks to continue this year. Strong components of digital transformation have only accelerated due to the effects of 2020. For instance, this year Egypt Vision 2030 has continued to progress with its implementation and has included significant announcements in the financial services sector. This includes the likes of the country's new banking law, helping regulate the performance of the Central Bank of Egypt (CBE) and the banking sector as a whole, which has a strong component in the fintech space.

Advancements in helping further boost the sector hit the headlines and this year will hopefully see further developments. For example, in 2020 the Central Bank of Nigeria (CBN) was released for review by stakeholders as a draft framework for a regulatory sandbox. While the South Africa Reserve Bank established a new fintech innovation hub, in collaboration with several other government agencies with an intergovernmental fintech working group (IFWG).[354]

GROWING POLITICAL AND ECONOMIC STABILITY VIA INTERNATIONAL TRADE AMONG REGIONAL MEMBERS WILL DRIVE ECONOMIC DEVELOPMENT

Despite the doom and gloom in 2020, there were positive headlines and much of this came from a wider economic development (particularly from an international trade and investment angle) and political landscape actually came direct from the MEA region. 2021 will most likely see these collaborations start to bear fruit.

Most notably in the Middle East, 2020 and 2021 has seen the GCC's unfolding developments with Qatar, which was blockaded back in 2017. The reopening of economic and political links between Qatar and Saudi Arabia, UAE, Egypt and Bahrain will have a lasting impact in the region in terms of its wider economic development. These five countries have thriving and growing aspirations in fintech – the report ranks them as emerging fintech hubs with UAE boasting premier status) – and we expect to see further benefits and further collaborations.

In 2020 to 2021, we also saw the establishment of ties between Israel and the UAE and Bahrain (later with Sudan and Morocco). The Abraham Accords, signed between Israel, the UAE and Bahrain (followed later by Sudan and Morocco formally recognising Israel) is starting to see fintech, financial services and wider digitalisation opportunities.[355] End of 2020, despite it being very recent, saw a range of memorandum of understandings (MOU) and other initiatives to link the countries in the Arab world with Israel.

With Africa, international trade and investment plays a strong role in economic development. The continent presents an opportunity via the new African Continental Free Trade Agreement (AfCFTA) established to deliver on Africa's goal for inclusive and sustainable development. As covered earlier in the report, the World Bank highlights that the 55 member nations of the African Union with their populations of more than 1.3 billion people would have a combined gross domestic product of $3.4trillion. Benefits highlighted include the ease of facilitation to promote international trade among members as well as potentially seeing sectors, such as fintech, see advantages in helping further grow in the continent.[356]

MEA HAS THE OPPORTUNITY TO LEAD THE WORLD TO A RESTORATION OF THE MICE INDUSTRY AND DUBAI EXPO 2020

In parts of the Middle East, particularly in the UAE, the global meetings, incentives, conferences and events (MICE) industry slowly started to grow again at the end of 2020 with an in-person hybrid model – where an event, conference and/or trade show gives both participants and/or speakers the opportunity to participate either virtually or in person. This is pretty rare still as much of the world remains in various lockdowns due to the pandemic at the time of publication. In 2021, if conditions remain the same, we could see parts of the Middle East continue to host hybrid events (in the GCC, Covid-19 cases are currently much lower than in the rest of the world). In addition, MEA has the world's top two countries in terms of population (Israel and UAE). At the end of 2020, we saw regional MEA fintech or tech related events, like Finnovex, Seamless Middle East, AI Everything X Restart Dubai Summer Conference, GITEX, and Singapore Fintech Festival (SFF)'s Dubai satellite event, all happen via a hybrid model in Dubai.

Pending other countries and their Covid situation, as well as the vaccine rollout, we could see the return of not only the MICE industry but even business travel. Parts of the Middle East, such as Dubai, are one of the first and it looks like the Middle East will continue that trajectory to be the benchmark for the rest of world to open safely in a post-Covid world.

IN FOCUS: EXPO 2020 DUBAI
1 OCTOBER 2021-31 MARCH 2022

While 2021 will be a spotlight for the Middle East as it continues to host hybrid events and recharge its MICE sector, end of 2021 will especially be a focal point for the region. The main reason is Dubai will be hosting the world's largest gathering of people, a World's Expo, Expo 2020 Dubai – scheduled now to be held from 1 October 2021 to 31 March 2022 due to the pandemic.

Expo 2020, now more than ever, with its theme of 'Opportunity, Mobility and Sustainability' will be key to celebrating humanity and the challenges and optimism we all have during the troubling times of 2020. In addition, digital innovations, which fintech plays a key part of in general, will have an opportunity to showcase current and future technologies and aspirations. Host UAE, who themselves have been a leader in digital transformation, will have an opportunity to showcase that alongside other country participants.[357]

Taken from a guest entry at the Bureau International des Expositions, a quote from the same author of this report, following the pending confirmation to confirm Expo's decision to delay for one year, states: "Now more than ever with the Covid-19 pandemic – which will hopefully be eliminated soon – World Expos have a huge role to show to the world the innovations and the best that humanity can do. The novel coronavirus came out of almost nowhere, affecting basic daily interactions and impacting almost everything. This has included the cancellation or postponement of large gatherings such as the upcoming Tokyo 2020 Summer Olympic Games as well as various international industry trade shows like Mobile World Congress and SXSW. Even our everyday lives, from educating our children to going to the shop have been impacted, sparking fears across the globe.

"Explaining the value that Expos bring is fundamental as they are global events aimed at finding solutions to challenges facing our world, offering a journey inside a particular theme through engaging and immersive activities. World Expos, one of the four Expo categories alongside Specialised Expos, Horticultural Expos and the Triennale de Milano, are global gatherings of nations where universal challenges – impacting all of us – can be addressed. What is unique about Expos, unlike industry trade shows, is that the events are centred around educating the public. These events therefore introduce the participants, business leaders, and political decision makers to the Expo's theme. It gives those in the industry and government an opportunity to learn best practices and collaborate, while interacting with the public and gauging reactions to new concepts, ideas and solutions."[358]

Prior to Covid-19, Expo 2020 aimed to target 25 million visitors.[359]

RECOVERY OF THE GLOBAL ECONOMY (EVEN INCLUDING FINTECH) WILL BE PENDING THE PANDEMIC CORONAVIRUS – OTHER PARTS OF MEA TO FACE ITS OWN CHALLENGES

Despite the initial optimism with other economic development bullet points, the global economy unfortunately still remains grim following the effects of the coronavirus pandemic from 2020. Developments in 2021 will depend on factors including vaccine implementation, such as from Pfizer/BioNTech, Moderna, Oxford/AstraZeneca, Sinopharm and Russia's Sputnik V. Although the fintech sector has done better than many, especially in comparison to more clearly hit sectors like tourism, transportation, hospitality – to name a few – various indirect and also direct consequences of the pandemic can still be felt.

As previously highlighted, the MICE industry has been severely affected by the pandemic and fintech relies on it, and on business travel in general. A full economic recovery is predicted by many experts to take years – even if Covid-19 ended today.[360]

In addition, MEA still has unique challenges across the region where prior to Covid-19 there were already certain issues. The report highlighted in the first chapter that MEA, particularly in many parts of Africa, still has much to advance in terms of its economic development. Africa is home to many of the world's poorest countries (as measured by GDP per capita), which has a knock-on effect across various aspects, such as brain drain and human talent (which will be addressed later in this chapter).

Despite the Middle East boasting some of the world's richest economies, there will be country-specific challenges. For instance, Lebanon will most likely have a slower recovery due to other economic factors that hit before Covid-19, in addition to the Beirut blast that happened in early August 2020.[361] In addition, Nigeria in 2020 faced its own anti-police brutality protests.[362]

> Predictions for 2021 show a global economic expansion of four per cent for this year, according to the World Bank

Covid-19, even in developed economies from the United States to Europe to even in the GCC and Israel, has had a devastating effect on the economy, As part of boosting the economy, governments across MEA have introduced stimulus packages. For instance, in the UAE, both Dubai and Abu Dhabi governments rolled out schemes with the aim of optimising costs, supporting businesses and demonstrating support. Pending on global recovery from Covid-19, MEA may have to continue supporting both their businesses and their residents.[363]

Nevertheless, despite last year showing a 4.3 per cent decline in the overall GDP, predictions for 2021 show a global economic expansion of four per cent for this year, according to the World Bank.[364] Fintech and other highly-skilled industries can and will play a big part in the world's global recovery.

2. TECH AND WIDER DIGITAL

The second theme, tech and wider digital, brings its own predictions for MEA in 2021 and beyond.

DIGITAL INFRASTRUCTURE WILL BE FUNNELED FROM WIDER ECONOMIC DEVELOPMENT STRATEGIES BOTH FROM THE TOP AND ORGANICALLY

Before Covid-19, it was expected that organisations in MEA would spend around $30billion on digital transformation last year, which would be driven largely by industries such as banking and energy. One-third of the total planned $20billion IT spend in MEA would go towards digital transformation initiatives.[365]

For instance, the GCC data centre market is expected to reach revenues of more than $2billion by 2025 with a cumulative revenue opportunity for data centre power infrastructure providers of $1billion during 2019-2025.

Despite the different stages of digital transformation advancement from the GCC in comparison to much of Africa, there remains strong determination and growth and 2021 will most likely see that accelerate. Nevertheless, as highlighted earlier, 800 million Africans still do not even have access to the internet.

The ongoing pandemic further demonstrates the need for digital experiences and the infrastructure to be able to do so.
While not necessarily fintech related, but across all aspects of daily live from education to healthcare to even food delivery, many aspects have had to go digital, requiring the necessary infrastructure to be able to do so.

MEA WILL STILL PRODUCE TALENT BUT THERE WILL STILL BE CHALLENGES – POTENTIAL FURTHER LAYOFFS AND MIGRATION

The population overall of MEA is young, with Africa home to 19 of the 20 youngest countries in the world and the Middle East having on average 30 per cent of their population between 15-29, the largest number of young people to transition to adulthood in the region's history. In particular in the Middle East and the GCC region, Israel and Turkey has a highly educated population as well. In the Kingdom of Saudi Arabia, for example, it spends 8.8 per cent of its GDP on education, which is double the global average of 4.6 per cent. It was also shown earlier that around 70 per cent in the Middle East have achieved at least secondary level.[366]

Due to the various lockdowns across the world and the challenges of the Covid-19 pandemic, it is estimated that in the first month of the crisis the income of informal workers in the region dropped by 81 per cent. Nearly 20 million jobs in Africa were forecasted to be threatened by the pandemic, which proves challenging as youth unemployment is twice that of adults. Therefore, this year will depend much on the economic recovery as the consequences could show unrest and further exodus of people across various skill sets.[367]

With regards to tech, the industry has seen various peaks and troughs, and will continue to do so this year. The e-commerce sector, including Amazon, has performed pretty well due to consumers having to go online, as well as online platforms

such as Zoom and Netflix. However, other aspects of tech, such as the gig economy and tourism (Airbnb for example), and generally those that require people interaction offline (for example Uber) have not fared so well.[368] This has resulted in mix reactions in terms of layoffs and job hiring in tech.

Despite that, much of MEA in 2021 will most likely continue to be a source of both blue collar and highly-skilled workers to more advanced economies – whether they are in the MEA or beyond. This happened historically up until Covid-19 and in particular with many highly skilled jobs and entrepreneurship where many would flock to more established tech clusters. With the growth of remote working and an exodus of cities, such as in London and San Francisco, this will be an interesting space to watch with regards to the MEA.[369]

3. FINTECH-SPECIFIC

Despite encompassing the wider tech and digital and the overall economic development aspect, there are fintech-specific predictions for MEA in 2021 and beyond:

FINTECH SOLUTIONS VIA A GROWTH IN CROSS-BORDER COLLABORATION WILL CONTINUE

The Abraham Accords has seen positive results despite its short existence. For example, Bank Hapoalim, one of the largest banks in Israel signed MOUs with the UAE's two premier financial centres – Dubai International Financial Centre (DIFC) and Abu Dhabi Global Markets (ADGMs). Large Israeli delegation also recently went to GITEX, a major tech trade show (significant in its own right for being held during the pandemic as part of Dubai's reopening to tourists). 2021 started with Bahrain FinTech Bay (BFB) and the FinTech Association of Israel –FinTech Aviv (FTA) signing an agreement that outlined the intention of both parties to cooperate and collaborate on matters of mutual interest relating to the development of the fintech industry in the region.[370] Given the importance of fintech in the three nations of Israel, UAE and Bahrain (in particular with their high rankings in Chapter Two), the sector will see further collaborations as a result of the Abraham Accords.

This year will also see the establishment of further foundations in fintech with respect to cross-border collaborations and potentially wider policies being developed to promote the sector and overall international trade and investment. For instance, this included the Aber Project between the UAE and Saudi Arabia.[371] Further cross-border collaborations are most likely to happen this year.

CONTACTLESS PAYMENTS AND OTHER PAYMENT SOLUTIONS WILL CONTINUE TO THRIVE AND E-COMMERCE WILL SLOWLY FURTHER CHANGE CULTURAL NORMS; REMITTANCES TO FURTHER DIGITALISE

This appears to be a general global phenomenon and not unique to MEA – even before 2020 and Covid-19. However, what 2020 showed is that paytech and the wider contactless experience will remain. What makes it noticeable in the wider MEA region is that compared to much of the world prior to Covid it saw slower adoption particularly with regards to e-commerce (mainly for cultural reasons). However, 2020 changed that when the world had to go contactless and virtual.

With payments, one in nine transactions at point of sale (POS) in MEA are now contactless as highlighted. A Checkout.com report also showed that 47 per cent of consumers say they expect to shop online more frequently over the next year.

2021 will most likely continue to see growth and adoptions of a more contactless way of payment and further embracement of e-commerce. Given that within MENA, where payments, transfers and remittances is around 85 per cent of the entire fintech companies operate within that space, this year and beyond will most likely see that percentage grow.[372]

Nevertheless, despite last year's surging global unemployment and salary cuts, MEA – home to some of the world's largest percentage of expats and immigrant workers – plays a unique front with remittances. As millions of migrants workers were reliant on money houses in a pre-Covid world, 2020's lockdowns, for those who still had money to send to their loved ones, saw digitalisation of remittances in particular with blue and working-class expatriates.

In the case of MEA, in particular with the GCC, they often come from South and parts of South East Asia and less developed economies of the Middle East and in parts of Africa. With more advanced African economies, they often come from mainly neighbouring African countries. A growing number of remittances solutions that will further disrupt traditional money houses will be interesting to watch in MEA this year and beyond.

HEADLINES, SUCH AS ANOTHER UNICORN MAY HAPPEN (EITHER IN 2021 OR BEYOND), AND BANKS MERGING AND THEIR ADOPTION OF FINTECH

With fintech unicorns, a sign of the environment growing included both Egypt's Fawry and Saudi Arabia's stc pay last year. This year could potentially see further companies enter the market – boosting the startup and small and medium enterprises (SMEs) in the space – with the potential of a new unicorn. It could be the next Israeli-born Payoneer or in terms of wider tech the next e-commerce Souq.com (acquired by Amazon.com) or taxi-hailing platform Careem (acquired by Uber).[373]

In terms of the key fintech hubs identified in the report, it is probable that the next fintech unicorn would most likely come from either the premier fintech hubs of Israel or even the UAE producing its first purely fintech unicorn.

With respect to bank headlines, 2020 saw the announcement of mergers, in particular with Saudi banks Samba Financial Group and Jeddah headquartered National Commercial Bank (commonly known as NCB) announcing a merger. Both in their own right, in terms of assets, are major MEA banks but the combined company will create a MEA powerhouse. Banks in 2021 in MEA will most likely see potentially another merger or some other headliner.

In addition, 2020, either as a result of pre- and post-Covid fintech embracement and wider digital transformation initiatives, saw an array of fintech solutions. The customer journey and access and usage of banking services incorporate fintech solutions, as seen from the previous case studies in the report. 2021 will continue to see banks in MEA further embracing fintech and wider digital solutions.

ISLAMIC FINANCE, REMITTANCES, OPEN BANKING, THE UNBANKED COUPLED WITH FINTECH WILL CONTINUE TO INTEGRATE TOGETHER

Islamic finance will continue to grow and fintech is a strong and growing component of that. As highlighted earlier,in an industry worth more than $2.1trillion the MEASA region plays a strong part of that. MEA-specific UAE and Saudi Arabia with Islamic fintech are in the top five of countries with most Islamic fintechs.[374]

Given the importance to much of the world's Muslim population, including the MEA region, Islamic finance and fintech go hand in hand. There will be growing partnerships, innovations and collaborations in the sector. We have already seen SaaS banking platform Mambu and Ta3meed announce a strategic partnership to accelerate the development of Islamic fintech in Saudi Arabia. Mambu's agile core banking technology integrates into Ta3meed's automated purchase order financing platform.[375]

With regards to remittances, this will further grow in importance with respect to fintech providing solutions. From sources of both blue and professional workers to being recipients of expatriates from across the world, MEA, in many ways, is a centre for the remittances industry. Despite the challenges of Covid-19, where expatriates have lost their jobs and had to go back home, remittances will still play a key role in the global economy.

With this year's predictions of global economic growth from a reversal of the previous year's contraction, remittances and fintech still have much potential besides the volume of transactions. One reason is the digitalisation of remittances still has much to go. This is particularly true for the unbanked and those who traditionally used expensive means to transfer money, such as money houses, with fintech continuing to disrupt and provide an alternative and more affordable mean of sending and/or receiving money from abroad.

Open banking will continue its growth and 'catchup' compared to much of the rest of the world with respect to MEA. Despite it being a newer concept, early adopters – particularly Bahrain – have shown that it can work well in the MEA region. 2021 will most likely see policies either being developed and/or implemented. For example, Saudi Arabia started off the year with a policy that, if it goes according to plan, its roadmap of launching open banking in the first half of 2022 would come into fruition.[376] 2021 and beyond the GCC, in particular with Africa, will be a focal point in terms of its adoption and foundation.

FINTECH WILL FARE BETTER THAN MOST SECTORS THIS YEAR

According to data platform Beauhurst, only one per cent of fintechs have been critically affected by Covid-19 and two per cent severely affected. By comparison, around 17 per cent of other high-growth companies fall into these categories. Generally, fintechs globally with their high level of equity finance, embracing remote working and agile operations coupled with the world's general push towards fintech solutions even before Covid-19 (which the pandemic accelerated), have shown its resilience.[377]

II. EXPANDING ON MEA'S FINTECH ECOSYSTEM: MOVING FORWARD

The Middle East and Africa region has the potential to further grow and seal its place alongside other regions in the fintech space. Nevertheless, there are key considerations that need to be taken into account that will help continue for fintech hubs in MEA to further grow their status, emerging markets to further accelerate their ecosystem developments and for the rest of the region to establish a fintech market that can foster innovation and growth.
The following are the key considerations:

- **Talent and reverse brain drain** – Maintaining talent in the region in that they do not immigrate to more established fintech hubs and take their know-how with them
- **Foster innovation and support for micro and small and medium enterprises (MSMEs) and startups** – Offering tools and other financial incentives to help companies thrive and grow
- **Streamlined efficiencies – ease of doing business** – Eliminate red tape to make it easier to do business

- **Wider higher-level government support on economic development and further promote digital transformation** – High-level government strategies that promote economic diversification and development will help further promote innovative disruptive technologies, such as fintech

Talent and reverse brain drain

Reverse brain drain is important to address due to the highly-skilled knowledge intensive fintech and wider tech requires for human capital and capability development. The brightest highly-educated often in emerging economies would be lured to developed economies, such as the United States and Canada, and Western European countries like the United Kingdom and Germany as well as in Asia Pacific, such as Singapore and Australia. This is clear with other developing countries, such as India, the Philippines, Pakistan and Bangladesh, where millions of their citizens – both low and highly-skilled individuals – seek future opportunity abroad.

The challenge tech, and specifically entrepreneurship and innovation, brings is that if the aspiring entrepreneur leaves a country, they are taking not only their talents but future benefits to the economy, such as job creation, revenues in taxes – to name a few – as well as intangible benefits, such as innovative know-how and IP of his/her solution to the benefit to tech clusters, such as Silicon Valley or London.

This has been evident in MEA – which has experienced an array of economic, political and/or other factors that have ignited immigration. Nevertheless, for MEA, given that there has been overall growth in fintech and tech and prioritisation to foster entrepreneurship, it will be a test of time to see that more and more of the brightest will choose to stay in their home countries rather than bring their know-how and skillsets to global hubs of Silicon Valley, London, or Singapore. In fact, even within MEA, the UAE, where approximately 80 per cent of the population are expatriates, has attracted some of the best and brightest across the world, many of which come from MEA. This is evident in many fintech and wider tech companies in Dubai and Abu Dhabi whose founders are not only mostly expats but many of which are from MEA.

On a final note, even established fintech hubs, such as Israel, have also lost – to some extent – their talent pool. Due to the small size of the country, larger opportunities abroad (particularly in the United States and Europe), a significant proportion of Israeli companies either move their headquarters completely abroad or a significant part of it. Maintaining talent will play a key part in fintech's continued success in MEA.[378-379]

Foster innovation and support for MSMEs – both established and startup and micro players

Small and medium enterprises play a significant role in many economies. For instance, in the United States small businesses in 2016 employed almost half of the private workforce, according to the Statistics of US Businesses (SUSB).[380] Therefore, their importance is vital for the global economy. In MEA, this also has a similar impact. For instance, in Dubai alone, according to the Ministry of Economy UAE, SMEs make up nearly 95 per cent of all companies, where their contributions to Dubai's GDP is around 40 per cent and employees over 40 per cent of the workforce.[381]

In terms of startups and tech companies in general, the previous section highlighted some key statistics, particularly in countries such as Israel where there are more than 6,000, the UAE where that number is over 2,000, their significance in the economy is noted. Aligning to the previous topic around talent, what fintech and tech as a whole brings to an economy is a highly skilled impact that has various benefits both direct and indirect. Therefore, in MEA, as well as the rest of the world, encouraging SMEs and startups to grow and thrive is important. Often referred in MEA, especially in Africa is MSME, or micro and small and medium enterprises, which showcases the importance in MEA with micro small players as well as more established SMEs; their support for both ends is important.

With FDI in general, it is important that the investment is not just merely a sales office but bringing value and also transiting to be a place where R&D and other innovative ideas are being developed. In addition, a region like MEA should also continue to boost and encourage the ability of its current and future entrepreneurs to be able to take an idea to market via various mechanisms of support – whether it be funding to access to talent. Particularly with much of MEA, brain drain is still a challenge especially with highly-skilled professions. Coupled with a further acceleration and promotion of high knowledge-based FDI to native-born innovations (in other words just not imported but one that provides an innovative solution to the MEA region but even beyond) will not only drive entrepreneurship but innovation in MEA in particular.

With respect to fintech, for instance, the interests and prioritisation of establishing regulatory sandboxes, open banking, and other fintech solutions have demonstrated that commitment. In terms of wider tech – innovation, incubator spaces and accelerators are other examples of support for the sector. The report has highlighted that the established and emerging countries of fintech have demonstrated their availability of incubator and acceleration spaces for their fintech and tech companies. This not only includes imports from abroad, such as Plug and Play and Startupbootcamp, but also home-grown MEA players, such as Flat6Labs (launched in 2011 in Cairo), Astrolabs (Dubai-headquartered with a presence as well in Saudi Arabia), Dubai International Financial Centre-based Fintech Hive, Abu Dhabi Global Market-based Hub 71, AlphaCode of South Africa and Bahrain FinTech Bay.

Access to finance, not just in MEA but globally, remains to be a challenge. According to a report from OECD, bank lending is the most common source of external finance for many SMEs. Many typically find themselves at a disadvantage with respect to large firms. In particular with middle and low-income economies, this proves to be the main barrier in starting a small business.[382] Especially in many parts of MEA this is where microfinancing, microlending and other solutions can come in and really benefit the MSMEs who otherwise would have little or no other sources to financing.

With regards to microlending, arguments for it show that it can help the poor and impoverished be alleviated from poverty as well as developing a sustainable way of income via entrepreneurship. However, with the rise of mobile banking, especially in East Africa, there could now be other solutions to help people with limited sources of funding in parts of MEA to access them.[383]

Financial access for those who need it most is a challenge still in MEA even for those who might even have access to banks. For instance, in Nigeria lending rates from banks are typically high (which could be as high with interest rates at 25 per cent), coupled with the difficultly due to cost for SMEs to obtain point of sale (POS) terminals and cross-border payments with foreign suppliers and daily transaction limits. However, from a wider economic SME point of view, support in access to finance and ease of doing business is important to their growth and development; fintech has played its part in finding solutions to these challenges.[384]

The Covid-19 pandemic has also demonstrated the importance of supporting MSMEs. For fintechs generally, much of their solutions have helped the world function as digitally and contactless as possible. Nevertheless, many fintechs are still SMEs and the support to sustain the SME economy globally has been a challenge. Across much of the world, including MEA, government initiatives to help boost and protect jobs has been clear.

This has included, for example, in Egypt, where it introduced a $6.4billion stimulus package, extending credit repayments for SMEs and increasing the daily withdrawal limits for debit and credit cards. The Central Bank of Egypt also announced a rate cut of three per cent. In addition, at the beginning of the effects of Covid-19, Israel gave a $180million stimulus package to support the country's high-tech industry.[385-386]

Despite the success fintech brings, most of them are still SMEs and are a large part of the wider SME ecosystem. If parts of it are affected, such as what Covid-19 have shown, it can affect even what appears to be relatively untouched as that of the fintech sector.

Streamlined efficiencies – ease of doing business

To be lean is a universal business acceptance as it is important to reduce as much unnecessary expenses as possible. This includes fintechs, who not just in MEA but globally, have challenges to do business in its home countries and abroad. The added complications of highly-skilled and innovative industries like fintech add an extra layer of intellectual property and solutions that prove to be challenging often when cross-border trade is concerned. Nevertheless, this could improve in the global market and within MEA.

The MEA region is home to strong political and economic alliances. An example is the Gulf Cooperation Council (GCC), which consists of Saudi Arabia, UAE, Oman, Bahrain, Kuwait and Qatar. Another one is the African Union (AU), which is a continental body that consists of 55 member states and a vision driven by "an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena."[387] Plus, there is AfCFTA.

With the growing economic and political harmonisation of various parts of MEA, or among its border geographies such as the GCC and the AU, cross-border transactions and business such as the likes of fintech, can prove to be beneficial for entrepreneurs. After all, to improve ease of doing business for a fintech company in a new market should be a win-win not only for them but for the recipient nation as well, as it will hopefully create jobs and economic growth via their expansion – whether it be international trade or direct foreign direct investment (FDI).

A report by the IMF cited that a gap in regulations in regions such as the MENA region, as well as talent and private capital among others, can hamper its growth. As highlighted previously, an interest in economic region integration via the likes of the AU can potentially in the long-term help streamline sectors such as fintech so that way in the not so long-term there could be a unified regulation and order for fintechs looking to do business in AU members, for instance. Likewise, this maybe can also apply similarly for the GCC.

To note, given the acceleration and exponential growth of fintech, even more established economic and political blocs like the EU are also adapting to a standardised practice and conformity as a result of its agreements predating the advancements of the sector.[388] In MEA, therefore, it remains to be a learning curve, as much as the rest of the world, in terms of its standardisation and how can regional blocs in particular unify and make it easier for cross-border business to be done. In other words, facilitating trade and investment via less red tape and allowing for innovation, rather than hampering it, can be of benefit not just for a highly fast-paced and innovative industry like fintech for MEA but globally.

Wider higher-level government support on economic development and further promote digital transformation

First, digital transformation has been the main dual pair for quite some time in much of the global economy; this without a doubt has accelerated last year due to the pandemic. From education to healthcare to even groceries – every aspect of life, when possible, had to embrace digital transformation due to Covid-19. The push for digital transformation has had to fall under both the private sector and the public sector. This has applied in the global economy and that of MEA.

In the private sector, in MEA the economy as a whole has made efforts to push for digital transformation as a whole as what this report showcased. In the banking sector, for instance, the largest banks in the region have been embracing fintech solutions and wider digital transformation. Nevertheless, compared to other parts of the world, there remains to be more opportunities to target. Deloitte reports that only 22 per cent of banking customers in the Middle East have embraced fintech, whereby a quarter are even aware of their fintech relevance. With adopters, most use fintech solutions only occasionally while 20 per cent report regular usage. Despite that, more than 80 per cent of the population in the Middle East that are open to fintech solutions are yet to adopt them.[389]

In terms of banking, two-thirds of the adult population in Sub-Saharan Africa lack access to traditional bank accounts. Looking at it per country in Africa as a whole the statistic would not be far off, as in Egypt, for instance, that figure looks to be in par, with almost 70 per cent of Egyptians unbanked. Solutions in fintech therefore have included mobile money, which has bridged the financial inclusion gap as showcased in the report.[390-394]

Separately, an excerpt quote from a *The Fintech Times* interview with Ambareen Musa, founder of Souqalmal.com, states: "We're seeing more banks and financial institutions jump on the digital bandwagon, launching digital-only banks, lifestyle banking apps and futuristic banking kiosks. Mobile wallets are also being introduced in a bid to promote cashless payments. Insurtech too, looks all set to revolutionise the local insurance industry and the insurance aggregator model is proving to be a game-changer."[395]

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Second, wider economic transformations need to further be implemented as they will play the most important role to help drive everything. Unique to MEA, there has been an emphasis on economic development and diversification here across both Africa and in the Middle East, particularly in the GCC.

With fintech, across recent memory much of its continued success in MEA will depend on the strategies coming from the top – whether they be national economic development and diversification strategies and/or digital specific ones – and importantly the implementation and adoption of them. From policy to other aspects of the fintech ecosystem to ensure its growth there has to be support and soundness coming from the top. From the 22 countries highlighted previously much of that has been occurring and continues to be progressing. What is important though is despite the levels of advancement there has been a unanimous message that the wider economic development support is needed. This can allow for fintech, which itself grew organically as its own important sector globally, to also accelerate its growth in MEA.

c. Summary of the report

This report concludes by summarising the generally short yet impactful journey that fintech has played in the Middle East and Africa. Although challenging to summarise a territory as vast and diverse as MEA, by contexualising its impact via its countries' various economic developments and diversification schemes, we found a region with much in common.

First, the report highlighted that diversification of the various MEA country economies is imperative. Whether it be from the vast oil-rich nations in the GCC (who are looking to prepare a future without relying purely on commodities), more middle-income African and Middle Eastern countries (aspiring to one day be in the developed countries categories) or less affluent African nations (simply seeking a highly strong middle-income economy), sectors such as fintech and the wider tech ecosystem can help play a strong role and formulates a strong part of that implementation. Fintech overall provides knowledge-intensive solutions which in turn provides jobs in a similar wave-length.

Second, MEA countries, particularly the 22 highlighted in section two, all show their governments in various capacities that support in the fintech sector, as part of the wider economic development help they provide, is imperative. This has identified the components to build and foster a fintech ecosystem, such as all of them in various forms – whether implemented or in discussion or through a regulatory sandbox.

Third, of the 22 fintech hubs, it is clear that those ranked in the emerging fintech hubs (Tier Two) and particularly the two ranked as premier global fintech hubs (Tier One – Israel and the UAE), were done so in this report from economic development lenses. It is easy to selectively choose the health of a sector – in this case fintech – by merely looking at just the number of companies in the sector or the number of deals it generated. However, to see why a specific country has those values we need to factor in the wider economic development health of the country and in a highly-skilled sector, such as fintech, the tech and wider digital landscape is important to note. From talent, particularly highly-skilled to entrepreneurship, to even seeing unicorns are important aspects of the fintech ecosystem – whether they be fintech-specific or wider economic indicators.

After all, before fintech became globally acknowledged as its own sector, which this report highlighted was a more than $100billion industry, it was once lumped just under tech, financial services or 'other'. The results from this report nonetheless confirms other elements of research and investigations done – whether it be Middle East, MEA, Africa, Sub-Saharan Africa or elements of fintech or tech – that the respective countries ranked the way they did. In other words, the startup nation Israel can justify why it got the highest rank in *The Fintech Times* research from this report. A similar message can be echoed with the United Arab Emirates, home to regional hubs of Abu Dhabi and Dubai, and particularly the former which in many rankings – from transportation to tourism to MNC regional offices – is not only the undisputed leader but in several sectors even now rivals traditional global hubs – the likes of London and New York City. Therefore, for the UAE to also achieve the premier global hub in this report should not be a surprise either.

Despite the growing support – both from the government level and organically, much more can be done to further accelerate the sector. The key point is fostering international trade and investment, including solutions (such as in the UAE) where companies have to register, which can take a while and be costly. The current landscapes of free trade agreements and/or economic and political members, such as the African Continental Free Trade Area, the African Union and the Gulf Cooperation Council, can help further facilitate that. In addition, with the Abraham Accords and Israel now able to do business with certain parts of the Middle East it was in the past excluded from, further collaborations can help accelerate organic growth in fintech.

It is (unfortunately) yet important to address the Covid-19 situation that has plagued 2020 and even this year to date. Although fintech has generally fared better than most sectors that have taken a beating, such as the MICE industry, tourism and transportation, given that fintech is part of a wider economic ecosystem it still has issues that can affect the recovery of the global economy. However, fintech, and in this case MEA, could still be the answer to help recover and accelerate global economic recovery. It is clear from our virtual existence by force (for those fortunate) last year that from contactless payments to helping facilitate virtual doctor visits and logistics to help facilitate the vaccine rollout – fintech either directly or indirectly has played a significant role in our day-to-day survival.

To conclude, this report aimed to give a landscape of the fintech landscape of the Middle East and Africa, a region of more than 1.7 billion inhabitants that spans Africa, parts of Asia and Europe (via parts of Turkey) from an economic development context. Understanding the sudden growth of the industry in the region in pre- and during Covid times showcases the reader the background into why and what is occurring. In addition, the large territory of the region is highlighted via various economic development measures to categorise in a quantifiable way various fintech hubs in the region. Finally, this year and beyond most likely will continue to see not only growth and importance of fintech in MEA but, due to Covid-19, a long-term effect in its necessity to conduct day-to-day business in a contactless and healthy way.

IV. Appendix and endnotes

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