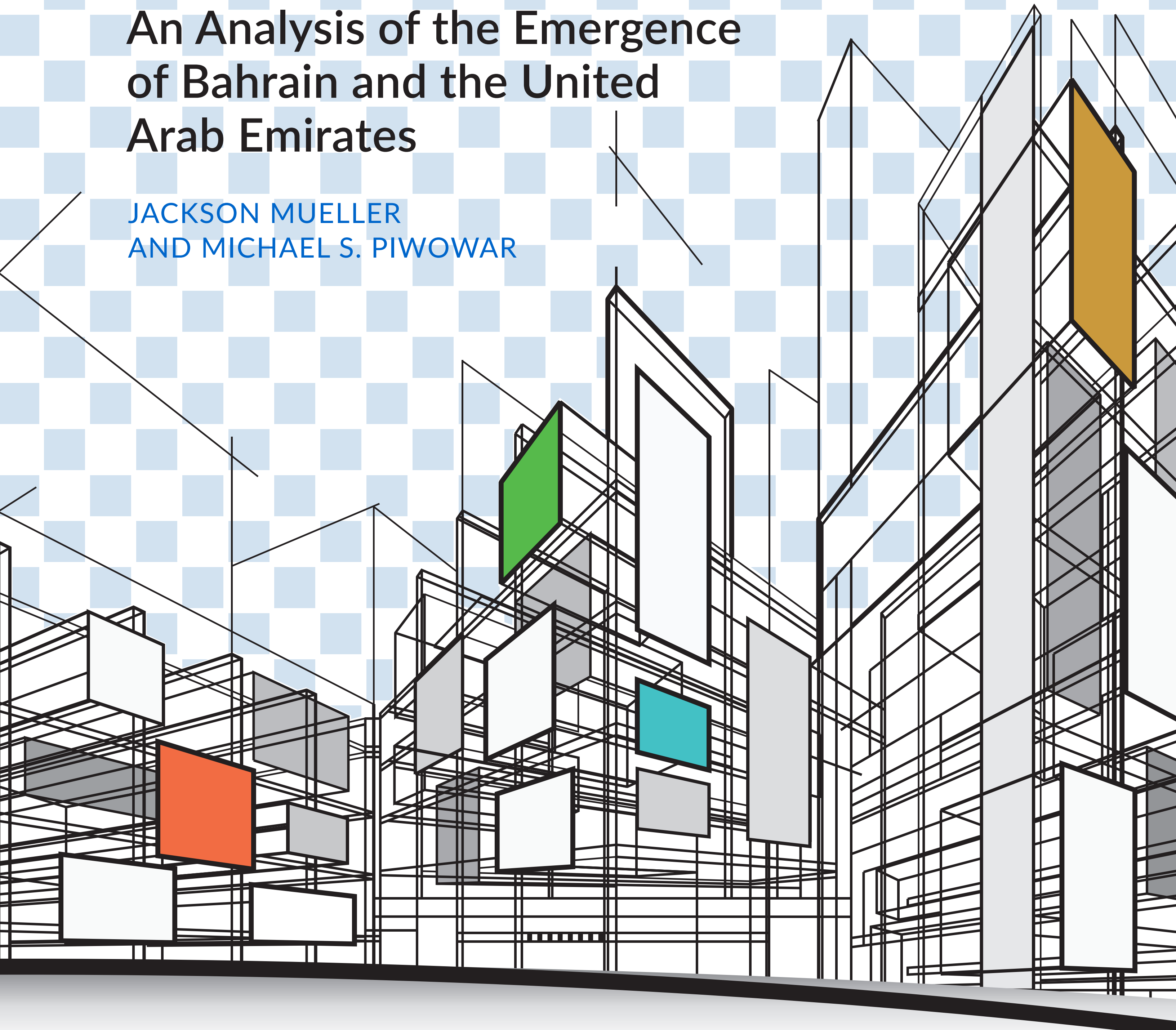
The Rise of FinTech in the Middle East

An Analysis of the Emergence of Bahrain and the United Arab Emirates

JACKSON MUELLER
AND MICHAEL S. PIWOWAR



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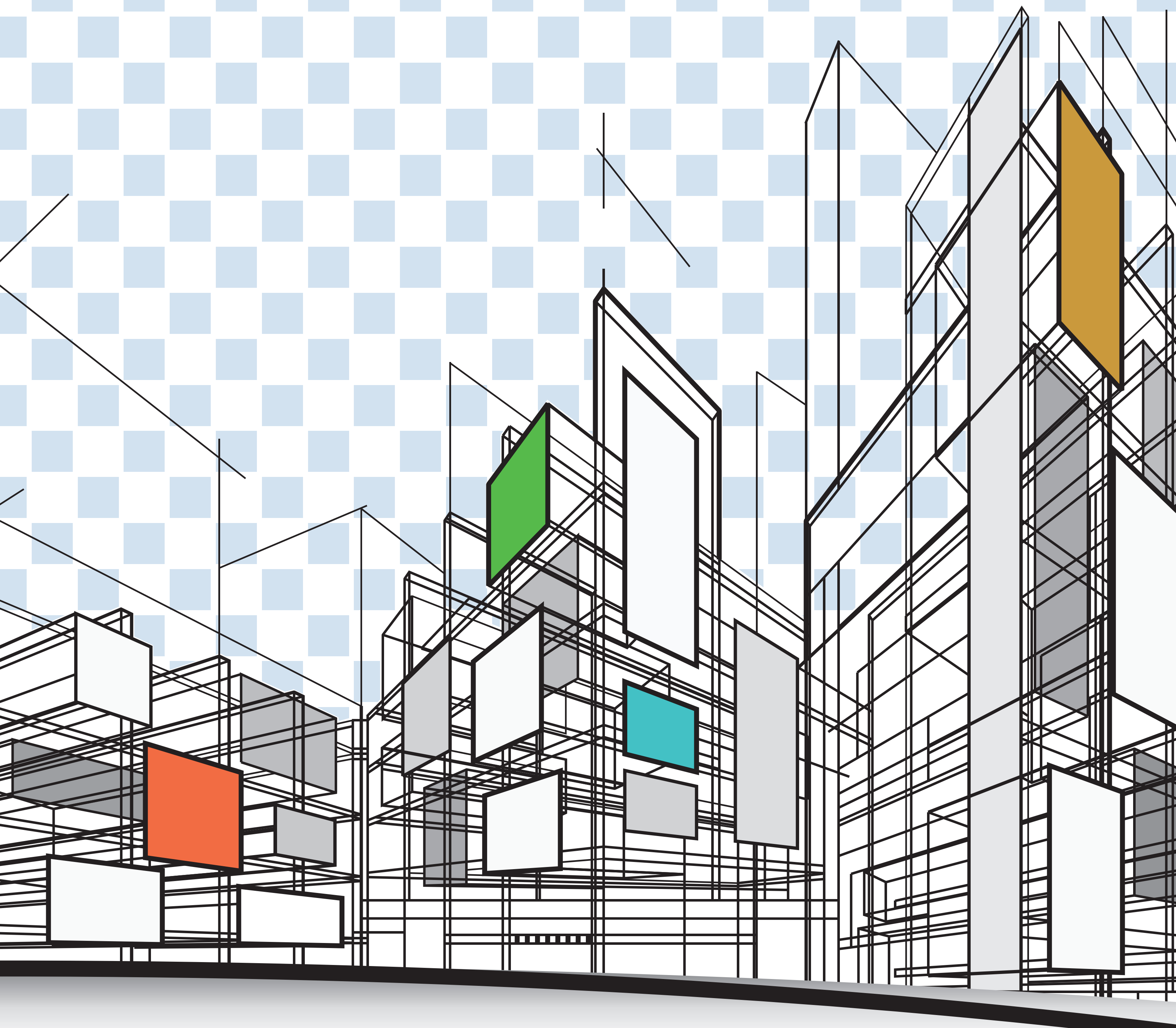


THE RISE OF FINTECH IN THE MIDDLE EAST

An Analysis of the Emergence of Bahrain and the UAE

Jackson Mueller and Michael S. Piwowar

FinTech regulatory regimes started emerging in the Gulf region[1] in 2017. Since then, the region has become a hotbed for FinTech activity and regulatory development, with several jurisdictions competing to establish themselves as *the* FinTech hub in the region. In February 2019, members of the Milken Institute Center for Financial Markets traveled to the United Arab Emirates (UAE) to speak with stakeholders involved in building, promoting, and/or fostering an ecosystem supportive of innovation within the financial services sector. Our conversations focused on the development of FinTech ecosystems in Bahrain and the UAE—two countries that receive the bulk of venture capital investment in the region and where FinTech-related policy and regulatory activity have spiked within the last two years.

Our discussions illuminated three key factors driving the emergence of Bahrain and the UAE as FinTech hubs in the region: (1) an ecosystem conducive to new financial alternatives, (2) an ecosystem where government is at the center of efforts to drive innovation as part of a larger remit, and (3) an ecosystem particularly interested in attracting international talent as a means of stimulating innovation domestically. Bahrain and the UAE have emerged as the leaders in the region for developing ecosystems supportive of FinTech development. This paper explores their emergence. At the same time, their leadership positions are not guaranteed going forward. This paper examines a variety of challenges both countries need to address and explores the challenges posed by increased competition from several neighboring countries beginning to ramp up efforts to develop their FinTech ecosystems.

1 When we use the term "Gulf region," we are referring to members of the Gulf Cooperation Council (GCC). It is important to point out that even though the focus of this paper is on the UAE and Bahrain, we provide some analysis on regional trends. In this paper, we cite several reports that have provided analysis on the Middle East and North Africa (MENA) region and the GCC. The MENA region, as defined by the World Bank, includes Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and

INTRODUCTION

The Milken Institute Center for Financial Markets is celebrating the fifth anniversary of our Financial Technology (FinTech) Program. Since its launch in October 2014, the program has covered the development and proliferation of FinTech platforms around the world; the introduction of innovative products and services by both tech-driven startups and financial services incumbents; and the continuing policy and regulatory responses, and adjustments to emerging technologies in the financial services sector.

The Center has been a leading voice in the debate over how policymakers should respond to the growth of FinTech. We actively promote flexible financial regulatory policy to foster greater FinTech innovations that enhance access to capital, financial inclusion, and transparency and compliance. Our focus on FinTech policy and regulatory developments began with the United States and the United Kingdom but has now expanded to roughly 60 countries and jurisdictions focused on building their own FinTech ecosystems and/or acting as regional hubs for innovation.

Since 2017, the Institute has been following the efforts of governments in the Middle East and North Africa (MENA) to implement their policy and regulatory frameworks to support the responsible development of FinTech in the region. To find out more about these countries' concerted efforts to develop into FinTech hubs, we traveled to the United Arab Emirates (UAE) in 2019 to take part in the Milken Institute's annual MENA Summit and to meet with several regulatory authorities and FinTech participants in the region.

This paper provides several takeaways on the development of FinTech in Bahrain and the UAE, based on multiple private roundtable discussions, public panel sessions, and one-on-one meetings.

SETTING THE FOUNDATION FOR FINTECH DEVELOPMENT

Gulf region policymakers and regulators began implementing forward-thinking and agile policies related to FinTech beginning in 2017. Since then, we have seen a substantial amount of effort to design more diverse, competitive, and innovative economies. The financial sector plays a key role in the massive effort to shift Gulf economies away from heavy reliance on government spending and the energy sector, and toward economies spurred by diversified private-sector investments leading to lower volatility and increased sustainability. Indeed, fostering healthy FinTech ecosystems is seen as a leading pillar of economic diversification across member states of the Gulf Cooperation Council.

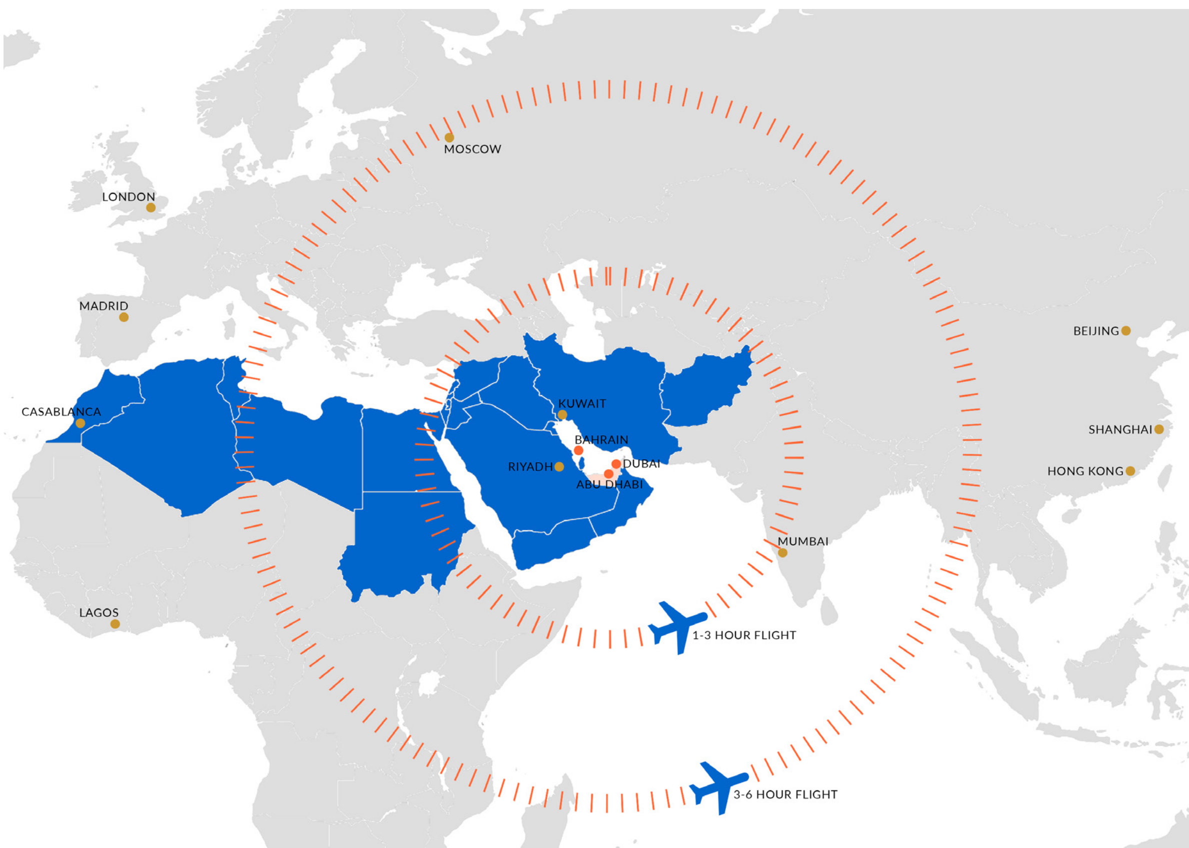
Yemen. Members of the GCC are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. A great diversity of countries make up the MENA region and the GCC, each with its own motivations and interests. The factors behind the emergence of Bahrain and the UAE into FinTech hubs could be completely different from the factors propelling other countries to develop their own FinTech ecosystems. We make an effort throughout the paper to identify the region(s) or country(ies) to which the cited numbers refer.

At first glance, FinTech investment in the MENA region may not appear very substantial compared to other leading regions. Globally, FinTech investment in the MENA region makes up only about 1 percent of global FinTech venture capital investment.[2] However, venture capital numbers do not tell the whole story, and focusing on that level of investment in the region obscures several other important demographic trends and industry-related developments that are quite favorable to the development of FinTech in the region.

Growing Domestic and Regional Customer Base

The MENA region is home to 450 million people. Of that total, about half of the population is younger than 25 years old.[3] A youthful population of such size presents an attractive and growing market of early technology adopters.

Figure 1: A Gateway to the Wider Middle East, Africa, and South Asia Region



Source: Milken Institute, adapted from ADGM.

2 Nada Al Rifai, "Middle East fintech investments make up just 1% of global total - Bahrain Fintech Bay CEO," Zawya, (March 3, 2019), https://www.zawya.com/mena/en/business/story/Middle_East_fintech_investments_make_up_just_1_of_global_total__Bahrain_Fintech_Bay_CEO-ZAWYA20190304025937/.

3 Veera Mendonca, et al., "MENA Generation 2030: Investing in children and youth today to secure a prosperous region tomorrow," UNICEF, (April 1, 2019), https://www.unicef.org/mena/media/4141/file.

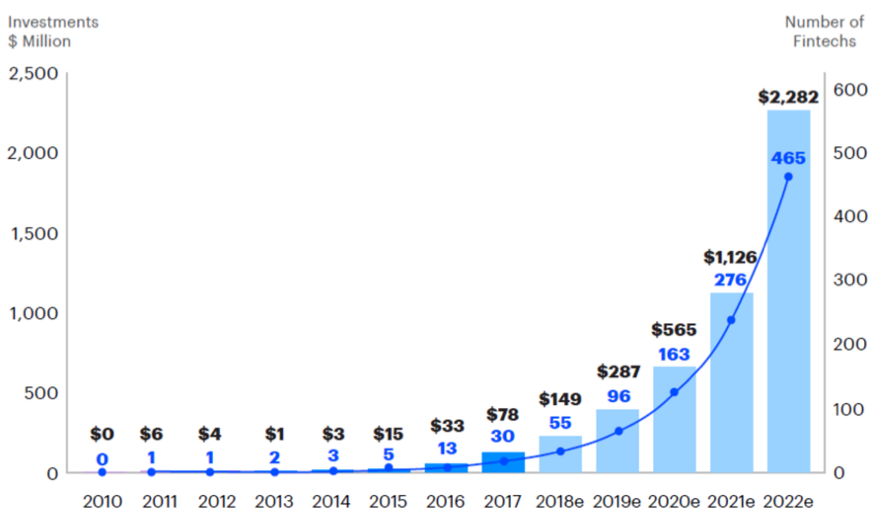
The region also presents opportunities due to its geographic location. One of the consistent messages we received from authorities in Bahrain and the UAE is that their respective countries act as a gateway to the wider region (Figure 1). By domiciling in either country, FinTechs have the opportunity to enter emerging markets across the Middle East, Africa, and South Asia. That expanded region is an $8 trillion market and home to 3 billion people, 70 percent of whom have limited or no access to financial services.[4,5]

This messaging is similar to what we have heard in the past from officials in Singapore, particularly from the Monetary Authority of Singapore. Essentially, "Use us as your regional headquarters to scale and enter new markets across the region." The region's proximity to several emerging markets and access to roughly 3 billion people is heavily promoted by stakeholders in Bahrain and the UAE who are interested in attracting international firms and startups to domicile or set up regional offices in their respective countries.

Positive Growth Trends and Established Payments Presence

While currently representing only 1 percent of global FinTech investment,[6] the FinTech sector across the Middle East is growing at a compounded annual growth rate (CAGR) of 30 percent. By 2022, estimates predict 465 FinTech companies in the Middle East will raise over $2 billion in venture capital funding, compared to the 30 FinTechs that raised nearly $80 million in 2017 (Figure 2).

Figure 2: Venture Capital Investment into Middle East FinTech Companies



Source: DIFC FinTech Hive and Accenture.

4 "DIFC home to first, innovative Equity Crowdfunding platform in the region, as Eureeca.com begins DFSA regulated activity," Dubai International Financial Centre, (November 6, 2016), https://www.difc.ae/newsroom/news/difc-home-first-innovative-equity-crowdfunding-platform-region-eureecacom-begins-dfsa-regulated-activity/.

5 "A Roadmap for FinTech Firms Entering Fast-Growing Emerging Markets: Featuring case studies and market analysis," LendIt FinTech, (2019), http://pages.lendit.com/2019-roadmap-for-fintech-firms-difc-white-paper.html.

Much of the investment in the region has flowed to some of the more active segments of FinTech. In particular, startups focused on payments and remittances, InsurTech, online lending, RegTech, digital banking, crowdfunding, blockchain, and cryptocurrency firms are emerging most regularly within the region (see Figure 3). That said, the vast majority of funding remains concentrated in the payments space: roughly 85 percent of FinTech firms in the MENA region operate in the payments, transfers, and remittances sector.[7]

Figure 3: Mapping the FinTech Ecosystem in the MENA Region

Source: Bahrain FinTech Ecosystem Report 2018.

Understandably, the majority of investment in the region has flowed to the payments space, as the region remains a hotbed for payments-related activity. The UAE, in particular, is a driving force in remittances thanks to its expatriate (expat) population, which represents roughly 90 percent of the country's total population.[8] In 2017, expat remittances from the UAE totaled $44.5 billion, three-quarters of which was transferred through money exchange companies and one-quarter sent through banks. India, Pakistan, and the Philippines were the top three receiving countries.[9]

6 Bahrain and the UAE attracted nearly $90 million in FinTech funding from 2010 to 2017. These two countries have attracted the most funding in the MENA region since the beginning of this decade.

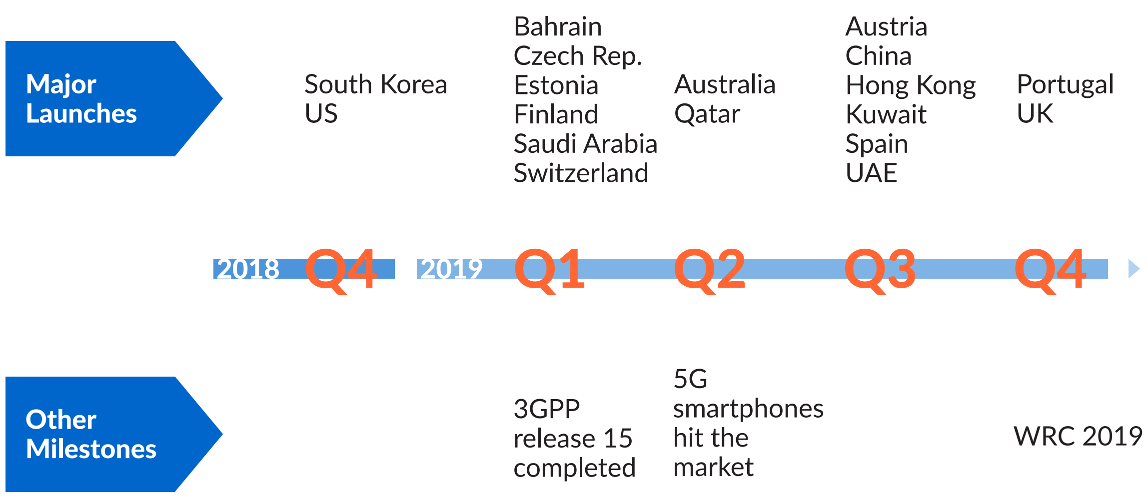
7 "Bahrain FinTech Ecosystem Report 2018," Bahrain FinTech Bay, (July 2018), https://www.bahrainfintechbay.com/fintech-ecosystem-report.

8 The vast majority of the expat population are contracted workers from overseas including laborers and domestic staff.

9 "Expat remittances in UAE surge to $44.5bn in 2017," *TradeArabia*, (March 12, 2018), http://www.tradearabia.com/news/BANK_337764.html.

The substantial penetration of mobile devices and internet connectivity has partially driven this activity in the region. In the Middle East, mobile penetration topped 100 percent in 2017, while smartphone penetration neared 60 percent.[10] In 2019, Bahrain, the UAE, and Qatar are among the most penetrated markets in the world. Saudi Arabia and Kuwait will join those three countries in launching 5G networks in 2019 (Figure 4).[11]

Figure 4: 5G Launches Accelerate, and Devices Hit the Market in 2019



Source: Milken Institute, adapted from the GSMA, The Mobile Economy 2019.

According to the World Economic Forum's 2018 Global Competitiveness Report, Bahrain ranks 38th out of 140 countries for information and communication technologies (ICT) adoption. Mobile-cellular telephone and mobile-broadband subscriptions in the country have reached 158 percent (10th place) and 147 percent (5th place), respectively.[12] As a percent of the population, Internet users now stand at 98 percent (3rd place).[13]

The UAE, meanwhile, has one of the highest levels of ICT adoption globally, ranking 6th out of 140 countries. Mobile-cellular telephone and mobile-broadband subscriptions have increased 211 percent (2nd place) and 243 percent (1st place), respectively. Internet users in the country now make up 91 percent of the population (11th place).[14]

10 "Invest, Collaborate, Compete: A $20 Billion Opportunity for Middle East and Africa FinTechs," *DIFC FinTech Hive*, (2018).

11 Huawei is involved in 5G rollouts in the UAE, Bahrain, Qatar, Saudi Arabia, and Kuwait.

12 Mobile-cellular telephone and mobile-broadband subscriptions are above 100 percent due to the fact that residents often carry more than one phone with them.

13 Klaus Schwab, "The Global Competitiveness Report 2018," World Economic Forum, (2018), http://reports.weforum.org/global-competitiveness-report-2018/.

14 Ibid.

The Emerging and Expanding Role of Investment Funds in Bahrain, the UAE, and Globally

Several investment funds have emerged over the years that play a critical role in the global FinTech investment ecosystem. Based on our conversations and subsequent research, six funds have emerged in Bahrain and the UAE since late 2017 focused on partnerships with other ventures or direct investment in innovative firms. Altogether, these funds have raised roughly $1.5 billion in capital. Only recently have several of these FinTech-related funds begun to shift from focusing on external opportunities to redirecting more of their capital to emerging opportunities within the region.

In many cases, these funds align with the strategic initiatives set by officials in Bahrain and the UAE, which are explained in more detail below. These initiatives seek to attract world-class talent to the region, further diversifying the economies within each country and positioning the region as a player in the global venture investment ecosystem.

In Table 1, we examine these six funds, their missions, and their overall focus. Of the six funds described, two are venture-led efforts and four are government-initiated.

Table 1: A Breakdown of Several FinTech-Related Investment Funds[15]

Fund Name	About	Quote
Abu Dhabi Catalyst Partners	**A venture-led effort by Abu Dhabi Global Market (ADGM)** **Announced**: April 2019 **Capital**: USD1 billion **Backed by**: Mubadala Investment Company **Focus**: Originate investment opportunities in the region, as well as ADGM-related oppopurtunites **Targeted opportunities**: Asset management, specialty finance, and financial infrastructure **Criteria**: Impact on job creation and engagement with wider ADGM-based service ecosystem	"This partnership will see a major new fund put its roots down in ADGM at an exciting time for the international financial center. With Mubadala's scale and networks across key international capital markets, I'm confident we will generate attractive returns while having a positive impact on the ADGM ecosystem of investors, investees, and service providers." — **Waleed Al Mokarrab Al Muhairi** Deputy Group CEO and Chief Executive Officer, Alternative Investments & Infrastructure, Mubadala[16]

15 There are two additional funds positioned to support the local startup ecosystem in the UAE worth mentioning: Mohammed Bin Rashid Fund (supports startups in Dubai) and Khalifa Fund (supports startups in Abu Dhabi). Both funds provide grants to locals and do not take equity stakes in the companies themselves. The downside of this model is that without an equity stake and no real requirements behind the grants being offered, there is little pressure or incentive to follow through.

16 "ADGM to be home of new, $1 billion fund: Abu Dhabi Catalyst Partners," *Mubadala*, (April 25, 2019), https://www.mubadala.com/en/news/adgm-be-home-new-1-billion-fund.

Fund Name	About	Quote
Ghadan Ventures Fund	**Government-initiated—Abu Dhabi** **Announced**: March 2019 (launched in May 2019) **Capital**: AED 535 million (~USD146 million) **Administered by**: Abu Dhabi Investment Office **Focus**: Co-invest with venture capital partners in Hub71-based tech startups through a government matching scheme and investment in first-time fund managers seeking to establish themselves in the Emirate[17] **Hub71 Partners**: Microsoft, SoftBank Investment Advisers, ADGM, Abu Dhabi Investment Office (ADIO), and Mubadala Investment Company	"The objective of the Ghadan Ventures Fund is two-fold, we are helping new VCs establish in Abu Dhabi to ensure local start-ups have access to more investors. Whilst also driving the establishment and growth of start-ups in Abu Dhabi by increasing the amount of investment capital available in the market." — **Elham Abdul Gafoor Mohammad Al Qasim** CEO of ADIO[18]
FinTech Fund (partial)	**Government-initiated—Dubai International Financial Centre** **Announced**: March 2019 **Capital**: USD10 million (part of the larger USD100 million FinTech Fund launched in 2018) **Administered by**: Wamda Capital and Middle East Venture Partners **Focus**: Accelerating the development of FinTech in the Middle East, Africa, and South Asia (MEASA) region by investing in startup and mature growth firms looking to access these markets	"We are looking forward to working closely with our partners at DIFC to develop a vibrant fintech ecosystem serving the needs of our wider region. This partnership to launch a dedicated fintech fund is the first step towards catalyzing innovation in this sector." — **Khaled Talhouni** Partner, Wamda Capital[19]

17 "Abu Dhabi Invests Over AED 1bn to Drive Tech Transformation Through Hub71," *Mubadala*, (March 24, 2019), https://www.mubadala.com/en/news/abu-dhabi-invests-over-aed.

18 "Abu Dhabi opens Dh535 million Ghadan Ventures Fund to boost start-ups," *Gulf News*, (May 7, 2019), https://gulfnews.com/business/markets/abu-dhabi-opens-dh535-million-ghadan-ventures-fund-to-to-boost-start-ups-1.63799768.

Fund Name	About	Quote
Al Waha Fund of Funds	**Government-initiated—Bahrain** **Announced**: May 2018 (launched in June 2018) **Capital**: USD100 million (USD35 million committed to a series of venture funds) **Administered by:** Bahrain Development Bank **Focus**: Investment in venture capital funds that directly invest in companies from the MENA region (Technology, FinTech, or Smart Cities solutions) **Partners include:** Mumtalakat, National Bank of Bahrain, Batelco Group, Tamkeen, and Bahrain Development Bank **Other**: Al Waha is the first active venture fund of funds in the region	"One of the key constraints on the development of the startup and technology ecosystem in the region is lack of access to capital—this fund can help to make a significant difference to that challenge, enabling entrepreneurs to realize the potential of their ideas." — **Shaikh Mohammed bin Essa Al Khalifa** Chairman, Al Waha Fund of Funds Advisory Committee[20]
Global FinTech Fund	**Venture-led—Bahrain** **Announced**: May 2018 (launched in October 2018) **Capital**: USD100 million **Backed by**: InQvest Partners, Alcazar Capital (Alcazar anchors the fund with 10 percent of total capital) **Focus**: Investment in FinTech opportunities in the US, Europe, Southeast Asia, and member states of the GCC **Other**: FinTech Consortium launched InQvest Partners, which established a presence in Bahrain FinTech Bay	"For decades, Bahrain has embraced changes in technology. With our firm commitment across government and private sector to further increase dynamism, creativity and innovation, the kingdom will continue to strengthen its position as a Fintech leader, regionally, and globally." — **Khalid Al Rumaihi** Chief Executive Officer, Bahrain Economic Development Board[21]

19 "DIFC launches $10 million fintech fund," *Wamda*, (March 11, 2019), https://www.wamda.com/2019/03/difc-launches-fintech-fund.

20 EDB Bahrain, "Bahrain Development Bank announces successful close of $100m venture capital fund of funds to support Middle East startups." Economic Development Board of Bahrain, (June 24, 2018), https://bahrainedb.com/latest-news/bahrain-development-bank-announces-successful-close-100m-venture-capital-fund-funds-support-middle-east-startups/.

Fund Name	About	Quote
FinTech Fund (full)	**Government-initiated—DIFC** **Announced**: November 2017 **Capital**: USD100 million **Focus**: Establish, grow, and upscale startup and growth-stage firms with a presence in or looking to access the MEASA markets **Other**: Plays a key role in the DIFC 2024 Strategy; Investment decisions will be made on a commercial basis, with no minimum or maximum levels;[22] DIFC signed a memorandum of understanding with Middle East Venture Partners, which includes providing a platform for them to co-invest or co-manage opportunities related to the fund.	"We don't mind having other entities, mainly government or semi-government entities, to participate in this fund. Today the fund is sufficient to support our own initiatives whether it is development of Fintech Hive, the type of companies that are going to be supported by an accelerator." — **Essa Kazim** DIFC Governor[23]

Source: Milken Institute.

These funds share some similarities, including:

- **Local accelerators connect startups and mature growth platforms to funding initiatives.** A common feature of the DIFC's $100 million FinTech Fund and the $150 million Ghadan Ventures Fund is the utilization of support networks as a way to drive investment. DIFC's FinTech Fund is expected to support DIFC FinTech Hive startups specializing in artificial intelligence, blockchain, and robotics.[24] The Ghadan Ventures Fund will focus on co-investment in technology startups located in Hub71.[25] As such, these funds provide additional incentive for firms considering whether to open up operations in ADGM or DIFC.

21 N Sundaresha Subramanian, "Bahrain to see $100 million fund for FinTech push," *The Economic Times*, (October 2, 2018), https://economictimes.indiatimes.com/news/international/business/bahrain-to-see-100-million-fund-for-fintech-push/articleshow/66037562.cms.

22 Mahmoud Kassem, "DIFC unveils $100 million fintech investment fund," *The National*, (November 14, 2017), https://www.thenational.ae/business/technology/difc-unveils-100-million-fintech-investment-fund-1.675622.

23 Siddesh Suresh Mayenkar, "Fintech firms to benefit from DIFC $100m fund," *Gulf News*, (September 12, 2018), https://gulfnews.com/business/markets/fintech-firms-to-benefit-from-difc-100m-fund-1.2124444.

24 Ibid.

25 Stanley Carvalho, "Abu Dhabi aims to lure start-ups with investment in new technology hub," *Reuters*, (March 24, 2019), https://www.reuters.com/article/abu-dhabi-tech/abu-dhabi-aims-to-lure-start-ups-with-investment-in-new-technology-hub-idUSL8N21A06Y.

- **Local funds are increasingly reliant on relationships outside the region to establish Bahrain and the UAE as active players in the global venture capital ecosystem.** We continue to see the emergence of venture funds of funds in the region, beginning with the launch of Al Waha Fund of Funds in Bahrain. These venture fund relationships are crucial in developing external connections to drive small- and large-dollar investment opportunities that will help establish the region as a significant player in the global venture capital ecosystem.

As Ibrahim Ajami, head of venture capital at Mubadala Capital put it during a panel session at the Milken Institute's MENA Summit 2019:[26,27]

> We really wanted to invest earlier on in [the investment cycle]. And the way to do that is we'd have to take an active approach with early-stage ventures. And if you want to do that, you have to be in the community with the founders, with the network. And you can't do that just in Abu Dhabi. You have to do that in San Francisco. You have to do that in China. You have to do that in London. Our technology and ventures approach requires a cohesive strategy that says 'how do we find the right partners?'

Establishing a presence in FinTech ecosystems[28] and growing relationships among local venture capital firms that are knowledgeable and active in the local technology-based ecosystems help raise the profile of the Gulf region among founders seeking to raise capital, while also demonstrating the region's long-term commitment to supporting technology-focused ecosystems.

26 "The Emergence of Venture Capital Mega-Funds," Milken Institute, 51:17, (February 12, 2019), https://www.milkeninstitute.org/videos/emergence-venture-capital-mega-funds.

27 Ibrahim Ajami, head of Mubadala Ventures: "By setting up this presence in Silicon Valley, we have told the venture community that we're here to stay. A big part of our strategy is to develop partnerships with them. It enables us to be close to them. It enables us to learn from them. We are leveraging the scope, the power, and the scale of Mubadala. There is no other venture platform in the world that can say that." The video of Ajami's remarks on setting up a presence in Silicon Valley can be accessed here: https://www.youtube.com/watch?v=suuBT1kJA78.

28 Mubadala Capital, for instance, has opened offices in San Francisco (2017) and New York City (2019). The firm also opened offices in Rio de Janeiro, Brazil (2016) and Moscow, Russia (2018).

Political Buy-In: FinTech as Part of Strategic Initiatives to Diversify Bahrain and the UAE Economies

These developments are the product of strategic initiatives championed by a variety of stakeholders.[29] Again, FinTech is part of much larger efforts among policymakers and regulators across the region to diversify their economies, including strengthening and promoting their financial services sectors and creating a favorable, competitive marketplace for both startups and incumbents to flourish.

While Bahrain and the UAE have taken steps on developing their FinTech ecosystems since 2017, these efforts are part of a broader set of initiatives launched as early as a decade before FinTech became a buzzword in policy and regulatory circles. Below, we provide insight into several of these initiatives launched in Bahrain and the UAE.

National Initiatives: Bahrain

Economic Vision 2030

In October 2008, His Majesty King Hamad bin Isa Al Khalifa announced a comprehensive economic vision for Bahrain focused on three guiding principles: sustainability, competitiveness, and fairness. To shift away from economic dependence on oil, the Economic Vision 2030 provides guidelines to turn the country into a global competitor. The ultimate aim of the effort "is to ensure that every Bahraini household has at least twice as much disposable income—in real terms—by 2030."[30] As such, the vision calls for stimulating private-sector growth in place of an oversized public sector, heightened labor productivity, and increased R&D in universities to drive the knowledge economy. These plans will facilitate harnessing emerging opportunities and developing world-class infrastructure, and creating a favorable climate for business formation based on agile regulation and economic incentives. Through these reforms—among others mentioned in the document—Bahrain's government anticipates the private sector will be the primary driver of economic growth by 2030.

To implement this vision, the government unveiled the National Economic Strategy (2008-2014) to guide the direction of the economy and government reforms in the short term. In light of the progress in implementing some of those reforms—as well as changing market dynamics—the government launched the National Development Strategy (2015-2018) as a medium-term strategic direction for the country.[31]

29 For the purposes of this report, we have largely focused on regulatory and policy efforts supportive of FinTech development. In our conversations with various stakeholders, we did not venture too far into private-sector efforts to stimulate FinTech growth.

30 His Majesty King Hamad bin Isa Al Khalifa, "Bahrain Economic Vision 2030," Government of Bahrain, (July 17, 2019), https://www.bahrain.bh/wps/wcm/connect/38f53f2f-9ad6-423d-9c96-2dbf17810c94/Vision%2B2030%2BEnglish%2B%28low%2Bresolution%29.pdf?MOD=AJPERES.

31 Embassy of The Kingdom of Bahrain (Washington, DC), "Economy," Bahrain Ministry of Foreign Affairs, https://www.mofa.gov.bh/Default.aspx?tabid=7669&language=en-US.

National Initiatives: United Arab Emirates

UAE Vision 2021 National Agenda

The UAE's Vision 2021 National Agenda (Agenda) announced in 2010 aims to position the UAE, by 2021, as one of the top performing countries in the world across several national indicators. To attain this, the Agenda incorporates six priorities: world-class health care, a competitive knowledge economy, safe and fair public judiciary, sustainable environment and infrastructure, a first-rate education system, and a cohesive society and preserved identity.[32] Within these priorities, the Agenda strives to sustain the UAE's progress towards economic diversification, including capturing developing trends and adapting to a continuously changing global economic landscape. To do this, the UAE has allocated substantial resources towards developing world-class information and communication infrastructure and establishing a competitive, entrepreneurial environment and risk-taking culture.[33]

UAE National Innovation Strategy

In line with the Agenda, the UAE's National Innovation Strategy (NIS) aims to make the UAE one of the most innovative countries in the world by 2021. The following key pillars support the NIS Framework announced in October 2014:

- an innovation-enabling environment (tailored and adaptive regulatory frameworks, best-in-class technology infrastructure, enabling services, and investment and incentives);
- innovation champions (individuals, companies, institutions, and government);
- innovation priority sectors (renewable and clean energy, transportation, technology, education, health, water, and space)

Included within the Innovation-Enabling Environment pillar, the government seeks the rapid enactment of rules and regulations supportive of innovation. It also seeks to build a first-rate education system through the promotion of research and development efforts across universities to foster an entrepreneurial spirit, attract global talent and the world's leading innovative companies to the country, and introduce new innovative funding options to meet the needs of individuals and companies. The framework calls for the development of "specialized zones" focused

32 His Highness (HH) Sheikh Mohammed bin Rashid Al Maktoum, "UAE National Agenda," Prime Minister's Office, https://www.vision2021.ae/en/national-agenda-2021.

33 Hi Highness Sheikh Khalifa bin Zayed Al Nahyan, HH Sheikh Mohammed Bin Rashid Al Maktoum, "UAE Vision 2021," Federal Government of the UAE, https://www.vision2021.ae/docs/default-source/default-document-library/uae_vision-arabic.pdf?sfvrsn=b09a06a6_6.

on several priority sectors and calls on government entities to devote 1 percent of their budgets to the implementation of innovation initiatives and projects.[34]

UAE Centennial 2071

A five-decade government plan that extends beyond 2021, the UAE Centennial 2071 is meant to position the UAE as "the best country in the world" by 2071.[35] The strategy involves focusing on four key aspects: education, economy, government and development, and community cohesion. Central to the education piece is a focus on advanced technology and engineering, which will feed into a national strategy to develop the future of the UAE's economy and industry. The five-decade effort extends the current UAE Vision 2021 initiative.[36]

Emirates Blockchain Strategy 2021

In April 2018, the government launched the Emirates Blockchain Strategy 2021 (Blockchain Strategy).[37] The Blockchain Strategy focuses on four key themes: the happiness of citizens and residents, elevating government efficiency, forward-looking legislation, and international leadership. The effort aims to capitalize on the promise of blockchain technology for e-government services by shifting 50 percent of government transactions to the blockchain within three years. Included in this effort is a focus on providing each user with a unique identification number to enhance the level of security of customer information based on the blockchain. The UAE estimates that it will save roughly $4 billion in transactions and documents processed routinely.[38]

Artificial Intelligence Strategy 2031

In late April 2019, the UAE Cabinet adopted the National Artificial Intelligence Strategy 2031 (AI Strategy). The AI Strategy incorporates five key themes: the formation of the UAE AI Council; workshops, programs, and initiatives; upgrading skillsets of government staff; full integration of AI into medical and security services; and issuing a government law on the safe use of AI. Apart from seeking to create a

34 HH Sheikh Mohammed bin Rashid Al Maktoum, "*UAE National Innovation Strategy*," Federal Government of the UAE, (May 30, 2019), https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-innovation-strategy. Embassy of The Kingdom of Bahrain (Washington, DC), "Economy," Bahrain Ministry of Foreign Affairs, https://www.mofa.gov.bh/Default.aspx?tabid=7669&language=en-US.

35 Mohammed Bin Rashid Launches Five-Decade Government Plan 'UAE Centennial 2071'," The UAE Cabinet, (March 22, 2017), https://uaecabinet.ae/en/details/news/mohammed-bin-rashid-launches-five-decade-government-plan-uae-centennial-2071.

36 HH Sheikh Mohammed bin Rashid Al Maktoum, "*UAE Centennial 2071*," Federal Government of the UAE, (May 30, 2019), https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/uae-centennial-2071.

37 HH Sheikh Mohammed bin Rashid Al Maktoum, "*Emirates Blockchain Strategy 2021*," Federal Government of the UAE, (May 30, 2019), https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/emirates-blockchain-strategy-2021.

38 "Mohammad Bin Rashid launches the Emirates Blockchain Strategy 2021," *Gulf News*, (April 11, 2018), https://gulfnews.com/technology/mohammad-bin-rashid-launches-the-emirates-blockchain-strategy-2021-1.2204107.

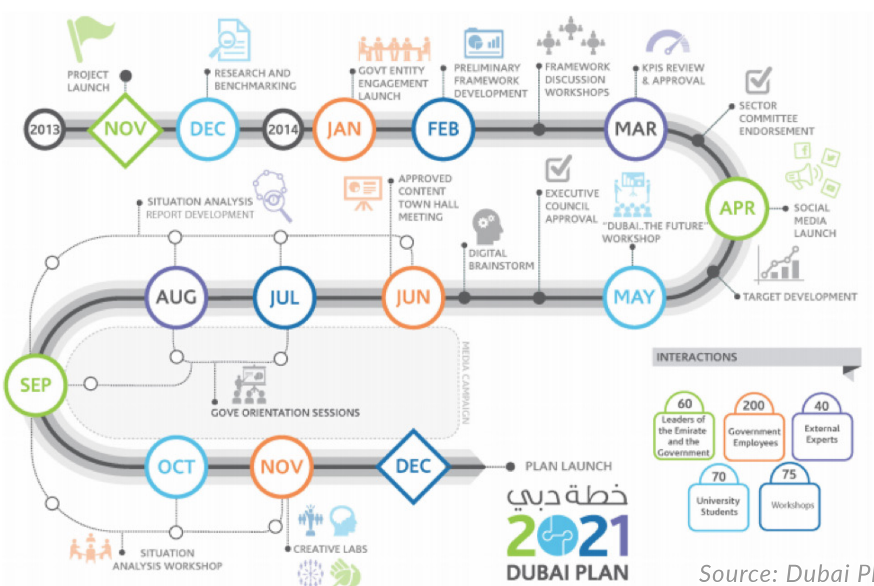
new vital market through this effort, the AI Strategy will also complement efforts to achieve the objectives set out in the UAE Centennial 2071.[39]

Local Initiatives: United Arab Emirates

Dubai Plan 2021

Launched in December 2014, the Dubai Plan 2021 is a sequel to the Dubai Strategic Plan 2015, which was announced in February 2007.[40] The Dubai Strategic Plan 2015 set ambitious targets for Dubai's growth across several priority areas and unveiled a roadmap to position Dubai as a pivotal economic hub in the global economy and a preferred place to work, live, and visit. The Dubai Plan 2021 is a continuation of this effort and builds on several key themes, including building a smart and sustainable city and reinforcing Dubai's economic position in the global economy. As it relates to the city's role in the global economy, the Dubai Plan 2021 calls for sustainable economic growth, Dubai's emergence as one of the world's leading business centers, and Dubai becoming the world's most business-friendly city and preferred destination for investment.[41] The "Development Journey" can be seen in Figure 5.

Figure 5: Dubai Plan 2021 Development Journey



Source: Dubai Plan 2021.[42]

39 HH Sheikh Mohammed Bin Rashid Al Maktoum, "*UAE AI 2031 Strategy*," Federal Government of the UAE, https://ai-everything.com/uae-ai-2031-strategy/.

40 HH Sheikh Mohammad bin Rashid Al Maktoum, "Dubai Strategic Plan 2015," Government of Dubai, https://www.dubaiplan2021.ae/dsp-2015-2/.

41 HH Sheikh Mohammad bin Rashid Al Maktoum, "Dubai Plan 2021," Government of Dubai, https://www.dubaiplan2021.ae/wp-content/uploads/2016/06/DP2021Booklet-%D9%83%D8%AA%D9%8A%D8%A8-%D8%AE%D8%B7%D8%A9-%D8%AF%D8%A8%D9%8A-2021.pdf.

42 HH Sheikh Mohammad bin Rashid Al Maktoum, "Dubai Plan 2021," Government of Dubai, https://www.dubaiplan2021.ae/dubai-plan-2021/.

50-Year Charter

Separate from the strategic plans the government is implementing or developing, His Highness Shaikh Mohammed Bin Rashid Al Maktoum announced in early January the 50-Year Charter, designed to develop a better quality of life in Dubai for future generations. The 50-Year Charter will contain nine articles, including plans to build a Dubai Silk Road, establish free economic and creative zones in universities to support students seeking to establish businesses, and develop a virtual commercial city that will include streamlined processes to establish and run a company. Exceptional projects that meet the Charter's goals will be announced in January each year.[43]

Abu Dhabi Economic Vision 2030

Announced in November 2008, the Abu Dhabi Economic Vision 2030 (Vision) is the product of discussions beginning in 2006 among a variety of officials in Abu Dhabi focused on the long-term economic vision for the Emirate. The 22-year strategy aims to create a more sustainable and diversified economy capable of responding to the pace of technological change to drive future competitiveness and growth. Nine pillars support the Vision,[44] with the government focused on four key priority areas: economic development, social and human resources development, infrastructure development and environmental sustainability, and optimization of government operations. The essential aim of the Vision is to turn Abu Dhabi into one of the most successful economies in the world by the year 2030.

To achieve this, the government of Abu Dhabi will revise current regulation and legislation to create the optimum environment for businesses to flourish. The government has prioritized improving its legal system and intellectual property (IP) enforcement, shifting away from greater consumption to developing new methods to drive savings rates, expanding ICT infrastructure and promoting adoption, bringing more Emirates into the private-sector workforce, developing and expanding the debt securities market, and developing a contemporary corporate governance framework to satisfy investors and businesses.

Tomorrow 2021

In September 2018, Sheikh Mohammed bin Zayed, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, announced Tomorrow 2021—a strategic vision to spur economic growth in the Emirate. The three-year vision includes 50 initiatives backed by an AED 50 billion (USD13.6 billion) budget for the Abu Dhabi Government Accelerators Program (Ghadan 21). The vision focuses on

43 HH Sheikh Mohammed bin Rashid Al Maktoum, "The 50-Year Charter," speech, Dubai, UAE, (January 4, 2019). https://www.mbrmajlis.ae/50-en/The%20Fifty-Year%20Charter.pdf.

44 The nine pillars of the Abu Dhabi Economic Vision 2030 are: 1) A large empowered private sector; 2) A sustainable, knowledge-based economy; 3) An optimal, transparent regulatory environment; 4) A continuation of strong and diverse international relationships; 5) The optimization of the Emirate's resources; 6) Premium education, health care, and infrastructure assets; 7) Complete international and domestic security; 8) Maintaining Abu Dhabi's values, culture, and heritage; and 9) A significant and ongoing contribution to the federation of the UAE.

four key areas: business and investment, society, knowledge and innovation, and lifestyle. As part of this effort, the Emirate seeks to attract international talent to Abu Dhabi and support that talent to derive economic and social benefits. Of the AED 50 billion allocated to this vision, AED 20 billion (USD5.5 billion) will be allocated in the first year.

In reviewing these plans, we found several commonalities among the initiatives:

- Diversifying the economy beyond a heavy reliance on natural resources
- Reducing the size of the public sector by developing a thriving private sector
- Enhancing human capital by addressing the shortage of appropriate skills and quality of the labor force and attracting innovative companies and talent to the region
- Fostering entrepreneurship and a competitive economy
- Enhancing economic well-being while preserving cultural heritage
- Creating a gateway to Asia, Europe, and Africa
- Developing beyond just a regional hub to become a global economic powerhouse
- Creating nimble regulatory frameworks to allow governments to adapt and respond to changing economic conditions and industries of the future.

Developing a conducive ecosystem for innovation, whether it be in the financial services or another sector, is a key part of both Bahrain and the UAE's efforts to diversify their economies. It helps foster a competitive private sector capable of replacing the public sector as the key driver of economic growth in both countries. The movement to develop FinTech hubs in Bahrain and the UAE forms a part of this larger effort, and a variety of actors in both countries have stepped up to create an environment suited for FinTech proliferation and development.

A Variety of Actors and Approaches to Supporting FinTech in Bahrain and the United Arab Emirates

Behind all of these strategic initiatives are regulatory bodies and government officials tasked with achieving their objectives. As it relates to FinTech, there are several government agencies, regulatory bodies, and active stakeholders involved in Bahrain and the UAE.

In Table 2, we look at some of the agencies and organizations tasked with developing healthy FinTech ecosystems.

Table 2: Regulators and Organizations Driving FinTech Development[45]

Bahrain	United Arab Emirates		
	Mainland	Offshore/Free Zones	
		Abu Dhabi	**Dubai**
Central Bank of Bahrain Economic Development Board Bahrain Development Bank	Central Bank of the UAE Securities and Commodities Authority Insurance Authority Emirates Development Bank	Abu Dhabi Global Markets Financial Services Regulatory Authority	Dubai International Financial Centre Dubai Financial Services Authority
Supportive Stakeholders			
Bahrain FinTech Bay FinTech Consortium		Plug N Play	DIFC FinTech Hive Startupbootcamp

Source: Milken Institute.

There is a variety of agencies involved in driving FinTech policy forward. Unsurprisingly, not all of these agencies are moving together in unison in proposing and implementing new FinTech-related initiatives or policy. This disunion is largely due to the differing structure of regulatory systems in both countries.

Bahrain

In 2017, the Kingdom of Bahrain added itself to the list of countries seeking to develop into FinTech hubs. What makes the country conducive to FinTech development is the fact that Bahrain is the GCC's longest established financial center with nearly 400 licensed financial institutions operating in the country. The financial services sector is the largest non-oil contributor to Bahrain's real GDP (16.5 percent), with more than 15,000 people employed in the sector alone, as of 2016.[46]

45 This is not an exhaustive list of regulators and agencies in the UAE and Bahrain who are reshaping the financial services landscape. However, the organizations and regulators listed in Table 2 are often associated with FinTech-related announcements and initiatives.

46 EDB Bahrain, "Financial Services Industry," Bahrain Economic Development Board, https://bahrainedb.com/business-opportunities/financial-services/.

Unlike the UAE, Bahrain maintains a country-wide approach to FinTech development and promotion. Bahrain's FinTech efforts are also largely driven by the Central Bank of Bahrain (CBB), whose governor, Rasheed Mohammed Al Maraj, has adopted an innovative mindset that has proven critical to Bahrain's emergence as a FinTech hub in the region. What also makes the country conducive to FinTech is that the Central Bank is the primary regulator in the country, tasked with supervising firms operating in the capital markets, banking, or insurance sectors.

Since 2016, the Central Bank has driven the Kingdom's regulatory approaches to FinTech. Table 3 and Table 4 detail the regulations and initiatives, respectively, adopted or launched by the central bank to turn the Kingdom into a FinTech Hub for the region.

Table 3: FinTech-Related Regulations Adopted by the CBB Since 2016

Timing	Regulation
February 2019	Finalized rules covering crypto-asset services and exchanges
December 2018	Created the open banking regulatory framework
November 2018	Standardized merchant presented QR code specifications used by retail payment systems in the Kingdom
March 2018	Introduced a secure private network for all retail banks to connect with the CBB to act as the primary communication hub for real-time Inter-Bank payment settlement
August 2017	Introduced the regulatory framework for conventional and Sharia-compliant crowdfunding platforms
January 2016	Launched the Electronic Fund Transfer System in conjunction with the Benefit Company

Source: Milken Institute.

Table 4: FinTech-Related Initiatives Launched by the CBB Since 2016

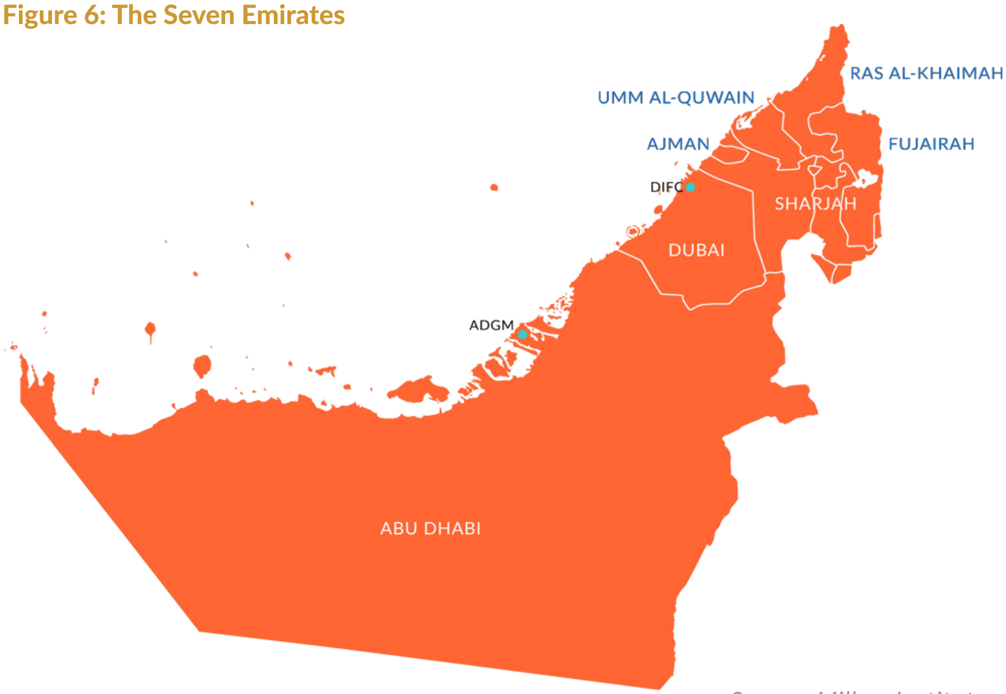
Timing	Regulation
August 2018	Original member of the Global Financial Innovation Network
October 2017	Formed a dedicated FinTech Unit
June 2017	Formally launched the CBB's Regulatory Sandbox

Source: Milken Institute.

United Arab Emirates

The UAE operates quite differently than Bahrain in its approach to FinTech. Unlike Bahrain's country-wide approach to FinTech development and adoption, the UAE government has decentralized its approach to FinTech by introducing more than 40 "free zones" among the seven Emirates: Dubai, Abu Dhabi, Sharjah, Fujairah, Ras Al Khaimah, Ajman, and Umm Al Quwain (see Figure 6).[47]

Figure 6: The Seven Emirates



Source: Milken Institute.

Each free zone operates under separate regulatory and governance structures, largely independent of the "mainland" authorities. As such, the rules and regulations applicable to companies situated in free zones can drastically differ from the rules and regulations applicable to companies operating in the mainland. Understanding the differences between the two and how the regulatory frameworks apply to entities operating in the mainland, a free zone, or both are critically important.

In Table 5, we highlight several distinctions between the rules and requirements applicable to a mainland company versus a free zone company.[48]

47 Dona Cherian, "45 free zones in the UAE: Find the right one for your new business," *Gulf News*, (August 15, 2017), https://gulfnews.com/lifestyle/community/45-free-zones-in-the-uae-find-the-right-one-for-your-new-business-1.1716197.

48 These are just a few distinctions that will continue to change over time due to enactment of new legislation and regulation.

Table 5: Differences Between the Mainland and Free Zones

Mainland Company	Free Zone Company
Definitions and Scope of Business	
Licensed by the Department of Economic Development (DED)	Incorporated in a designated free zone jurisdiction within an emirate
Allowed to do business in the local market and/or outside the UAE without restrictions	Allowed to do business in the free zone and/or outside the UAE. There are barriers to conducting local business or entering another free zone
Ownership Structure	
Requires a UAE National as Local Partner or Local Service Agent	Free zone license: 100% ownership by expat Partner. No need for UAE National partner/service agent
Commercial license: 51% of shares held by a UAE National, 49% of shares go to expat Partner[49]	
Professional License: 100% of shares are held by expat Partner; UAE National appointed as Local Service Agent	
Office Space	
Minimum requirement of 200 sq. ft. that needs to be leased out annually. The DED then issues the license	No requirement for physical workspace for free zone companies
	Virtual offices may also be allowed
Visa Issuance	
No limitations: Ministry of Labor issues E-quota for mainland company, which includes visa eligibility	Limitations: Have to lease out physical office space to obtain more visas
Legal Environment	
UAE legal system	English common law (financial free zones only: ADGM and DIFC)[50]

Source: Flyingcolour, KWS Middle East, and CommitBiz.

49 On July 2, 2019, the UAE Cabinet announced that 122 economic activities across 13 sectors would be eligible for up to 100 percent foreign ownership. This includes renewable energy, space, agriculture, manufacturing industry, hospitality and food services, and information and communications, as well as professional, scientific, and technical activities. The list also includes administrative services, support services, educational activities, health care, art and entertainment, and construction. Importantly, according to a UAE Cabinet press release, local governments will "determine the ownership percentage of foreign investors in these activities." As such, there's still a possibility that an Emirati shareholder could be required even if the foreign ownership threshold increases. The UAE Cabinet press release can be viewed here: https://uaecabinet.ae/en/details/news/uae-cabinet-adopts-economic-activities-eligible-for-up-to-100-foreign-ownership.

50 Of the remaining free zones, some have specific licensing laws (and permit 100 percent foreign ownership), but otherwise adhere to UAE laws.

As it relates to FinTech policy and regulatory developments, the following two financial free zones are particularly active:

> *Abu Dhabi Global Market*
> Established in 2013 by the government of the Emirate of Abu Dhabi, the Abu Dhabi Global Market (ADGM) free zone is located on Al Maryah Island and plays a key role in implementing Abu Dhabi's Economic Vision. Opened for business in 2015, ADGM is designed to become a world-leading international financial center composed of local, regional, and international institutions. Three independent authorities—the Registration Authority, the Financial Services Regulatory Authority, and ADGM Courts—govern the free zone and maintain a business-friendly environment. Its civil and corporate legal regime is based on English common law.[51] The free zone's mission stems from five key values: innovation, recognition, collaboration, economic responsibility, and acting as the preferred gateway to the Middle East, Africa, and Central Asia.[52]

> *Dubai International Financial Centre*
> Established in 2004 by the government of the Emirate of Dubai, the Dubai International Financial Centre (DIFC) free zone is located right in the heart of Dubai and, like ADGM, plays a key role in implementing several of the Emirate's strategic initiatives. Like ADGM, the DIFC has positioned itself as a world-leading international financial center governed by three independent bodies: the DIFC Authority, the Dubai Financial Services Authority, and the Dispute Resolution Authority. Its civil and corporate legal regime is also based on English common law. The Centre's ultimate vision is to drive the future of finance. By year-end 2018, the DIFC recorded more than 2,100 active registered companies operating in the Centre, of which 625 were financial services firms. The Centre's workforce has expanded over the years to nearly 24,000 professionals from a variety of regions, including the Middle East (36 percent), Europe (33 percent), Asia (11 percent), and the United States (10 percent).[53]

Unlike Bahrain, the UAE's efforts to develop itself into an attractive hub for FinTech firms have not come primarily from the direction of the UAE Central Bank or other mainland regulatory authorities, but through the efforts of ADGM's Financial Services Regulatory Authority (FSRA) and the DIFC's Dubai Financial Services Authority (DFSA).[54]

51 It is important to note the commercial laws within the financial free zones of ADGM and DIFC are based on English common law. While other free zones may have specific commercial licensing laws, such as permitting 100 percent foreign ownership, they otherwise adhere to UAE laws.

52 Abu Dhabi Global Market, https://www.adgm.com/.

53 Dubai International Financial Centre, https://www.difc.ae/.

54 It is important to note the more prominent regulatory players in the FinTech space in the UAE are relatively young. The UAE Central Bank was established in 1980, while the DIFC and ADGM economic free zones were established in 2004 and 2013, respectively.

Perhaps the best FinTech "horse race" to watch within the region is not the race between Bahrain and the UAE, but the race between these two free zones within the UAE. Not a week goes by without news of a new initiative being launched or regulation being adopted by one of these regulatory authorities as part of larger efforts to build themselves into FinTech hubs for the region.

The competition between ADGM's FSRA and the DIFC's DFSA to attract and develop world-class talent in the FinTech space has spawned a number of regulations and initiatives since 2016. Table 6 and Table 7 provide a review of important regulations and initiatives, respectively, adopted or launched by the FSRA and DFSA.

Table 6: Free Zone FinTech Regulations Adopted Since 2016

ADGM FSRA	DIFC DFSA
Upcoming: Standards regarding APIs; use of the Cloud; further guidance on digital securities for primary and secondary market consideration	Upcoming: Legislative framework for money services businesses
Regulatory and governance regimes for Robo-advisers (July 2019)	Fund passporting legislation with the Emirates Securities and Commodities Authority, ADGM, and DFSA to enable UAE-wide promotion of investment funds licensed by each authority (March 2019)
Regulatory framework for virtual banks unveiled (July 2019)	Common regulatory framework for the licensing of domestic funds with FSRA, Emirates Securities and Commodities Authority (November 2018)
Enhanced guidance covering the regulation of crypto asset activities (May 2019)	Enhancements to its data protection regime (January 2018)
Enhancements to ADGM's Anti-Money Laundering regime (April 2019)	Regulatory framework for loan- and investment-based crowdfunding platforms (August 2017)
Fund passporting legislation with the Emirates Securities and Commodities Authority, ADGM, and DFSA to enable UAE-wide promotion of investment funds licensed by each authority (March 2019)	
Common regulatory framework for the licensing of domestic funds with DFSA, Emirates Securities and Commodities Authority (November 2018)	
Regulatory framework introduced for operators of Private Financing Platforms in ADGM (September 2018)	

Table 6: Free Zone FinTech Regulations Adopted Since 2016 Continued

ADGM FSRA	DIFC DFSA
Crypto-asset regulatory framework (June 2018)	
Enhancements to ADGM's capital market regime including Remote Membership framework (March 2018)	
Enhancements to its data protection regime (January 2018)	
Regulatory framework for managers of venture capital funds (May 2017)	

Source: Milken Institute.

Table 7: Free Zone FinTech Initiatives Launched Since 2016

ADGM FSRA	DIFC DFSA
Unveiled the FinTech Digital Sandbox (September 2018)	Original member of the Global Financial Innovation Network (August 2018)
Original member of the Global Financial Innovation Network (August 2018)	Expanded the Innovative Testing License for FinTech Firms (May 2018)
Launched an industry electronic Know Your Client (KYC) utility project (February 2018)	Launched the Innovative Testing License for FinTech firms (May 2017)
ADGM Regulatory Laboratory (RegLab) launched (November 2016)	

Source: Milken Institute.

During the course of our conversations with stakeholders in Abu Dhabi and Dubai, we heard of several challenges stemming from the fragmented regulatory and governance structures in the UAE.

The schism between mainland and free zone governance presents challenges.

"Who regulates me?" We have heard this familiar question from many US FinTechs as a result of regulatory fragmentation at both the state and federal levels. Several stakeholders we spoke with in the UAE also raised this question. There is confusion as to which regulator to turn to and who ultimately regulates a platform or activity.

Mainland authorities? The regulatory authority in the free zone?

Stakeholders also expressed concerns that the lack of a consolidated market in a country split between mainland and free zone requirements can often inhibit investment and scaling opportunities within the country. Free zones have unique identities and governance structures that can often make it challenging or economically unfeasible to enter new markets within the UAE.[55]

Just like in the US,[56] however, preliminary efforts are underway to create a more streamlined licensing process among the more than 30 free zones located in the Emirate of Dubai, for instance. At a Dubai Free Zones Council[57] meeting in June 2018, members discussed the creation of a centralized electronic system to streamline the licensing process and further reduce licensing costs across the 30-plus free zones.[58] In mid-May of 2019, council members struck a preliminary agreement that would allow for companies operating in one free zone to operate in other free zones in Dubai without the need for additional licenses.[59]

Similarly, mainland and free zone regulatory authorities have made efforts to create a passporting regime to support the UAE mutual funds market and meet diversification goals. In March 2019, the Emirates Securities and Commodities Authority (ESCA), the FSRA, and the DFSA announced new rules to facilitate the promotion of investment funds across the UAE. The passporting agreement acts as a regulatory mechanism "for the mutual promotion and oversight of investment funds established in the different jurisdictions within the UAE," according to His Excellency Sultan bin Saeed Al-Mansouri, Minister of Economy and Chairman of the Board of Directors of the ESCA.[60]

These efforts, while notable, are still rare.

55 We also heard that the different economic zones and lack of harmonized regulatory frameworks from the federal level down to the free zones present challenges to the health-care sector as well.

56 "State Regulators Take First Step to Standardize Licensing Practices for Fintech Payments," *Conference of State Bank Supervisors*, (February 6, 2018), https://www.csbs.org/state-regulators-take-first-step-standardize-licensing-practices-fintech-payments.

57 Dubai Free Zones Council, http://dubaifreezonecouncil.ae/.

58 Sarah Townsend, "Dubai free zones unite to boost foreign investment flows," *The National*, (June 1, 2018), https://www.thenational.ae/business/economy/dubai-free-zones-unite-to-boost-foreign-investment-flows-1.735701.

59 Waheed Abbas, "Dubai free zones mull single licence for all free zones," *MSN*, (May 14, 2019), https://www.msn.com/en-ae/news/uae/dubai-free-zones-mull-single-licence-for-all-free-zones/ar-AABl4lB?li=BBqrVLO&c=7197326682809359699&mkt=en-us.

60 "ESCA, ADGM and DFSA Launch Fund Passporting Legislation Enabling UAE-wide Promotion of Investment Funds," Dubai Financial Services Authority, (March 11, 2019), http://www.dfsa.ae/MediaRelease/News/ESCA,-ADGM-AND-DFSA-Launch-Fund-Passporting-Legisl.

The DIFC and ADGM are independent, to a large extent.

The extent to which DFSA and FSRA are actually independent is an open question. While constitutionally independent from the mainland in regards to commercial laws, the DIFC and ADGM still have to adhere to anti-money laundering (AML) laws, restrictions on Dirham-denominated businesses in the free zones, and certain payments-related regulations issued from mainland authorities. Also, ADGM and DIFC often engage with the UAE Central Bank, even requesting input on certain initiatives (e.g., cryptocurrency rules[61]).

However, several individuals in our conversations do not view the UAE Central Bank an enabler in the development and promotion of FinTech in the UAE. As several individuals indicated, the Central Bank has previously taken a timely, more methodical approach to unveiling and adopting measures of critical importance to both startups and incumbents seeking to unleash innovation.

Until late 2018, the UAE Central Bank was the only onshore regulator to have introduced FinTech-related regulations. In January 2017, the Central Bank published a new regulatory framework covering stored value facilities offering digital payments services.

However, as Jack Hardman, a senior associate at Clifford Chance, wrote in a recent report on the 2017 regulations:[62]

> Currently, the licensing scope is uncertain, and a number of implementing rules are awaited (and expected in the coming months) before license applications can be made. Depending on the interpretation of the Central Bank, its framework may have a more limited remit than initially thought, and a number of industry participants have received

61 For example, the ADGM FSRA reached out to the Central Bank for input on its crypto asset regulatory framework. Based on our discussions, the Central Bank did not provide any feedback, and ADGM FSRA pushed on with its work.

62 Jack Hardman, "FinTech in the Middle East - Developments Across MENA," Clifford Chance, (January 31, 2019), https://www.cliffordchance.com/briefings/2018/12/fintech_in_the_middleeast-developmentsacros.html.

guidance that the rules will not apply to them. Others, we understand, have pursued in-principle approvals to continue with mobile wallet projects until full license applications can be made.[63]

Only recently has the Central Bank resurfaced in FinTech-related discussions after joining with the Saudi Arabian Monetary Authority to launch a common digital currency project called Aber. The Central Bank also recently received enhanced powers from the UAE government covering consumer protection, confidentiality, protection, and appropriate use of customer banking and credit information, among other powers.

Competition inhibits cooperation.

Both ADGM and the DIFC are so focused on developing their free zones into regional Fintech hubs that the competition between the two free zones, at least from a regulatory perspective, is intense. This intensity has resulted in no notable examples of cooperation/engagement between the DIFC DFSA and ADGM FSRA on FinTech-related issues.

The DFSA and FSRA have pushed forward on efforts to develop their FinTech ecosystems independently of each other. This presents challenges to industry stakeholders seeking a more coordinated, harmonized set of regulatory frameworks.

As with other free zones, different governing structures and requirements between the two zones makes it cumbersome for FinTechs operating in one zone to expand into the other. While the two regulatory authorities jointly signed a memorandum of understanding (MoU) back in 2016, it is unclear to what extent this mutual willingness to cooperate and exchange information extends to FinTech-related developments and initiatives, or to what extent this MoU has led to greater cooperation and engagement.[64]

63 In September 2018, the president of the UAE announced a new Central Bank law that replaced the outdated federal law, the Monetary System and Organization of Banking. The new law reconfirms the UAE Central Bank's role in supervising the banking system in the UAE and expands the central bank's authority. The new law also includes activities related to the provision of electronic retail payments, digital money services, and virtual banking services. However, as stated in a release from CMS Law-Now, "there is currently no guidance on what practices each activity category covers but the New Central Bank Law mandates that the Board of Directors of the Central Bank (the 'Board') will classify and define the Licensed Financial Activities as well as issuing rules, regulations and standards and determine the conditions for granting licenses for such Licensed Financial Activities." In our stakeholder discussions, the Central Bank had yet to provide clarity or implementing regulations on these new financial activities. Further information about the new law can be read here: https://www.cms-lawnow.com/ealerts/2019/02/the-new-uae-central-bank-law.

64 DFSA Strengthens Regulatory Co-operation in the UAE," Dubai Financial Services Authority, (August 23, 2016), https://www.dfsa.ae/News/News-Detail/DFSA-Strengthens-Regulatory-Co-operation-in-the-UA.

Challenges in Developing or Attracting Human Capital to Bahrain and the United Arab Emirates

One of the interesting takeaways from our conversations with officials from Bahrain and the UAE was the amount of effort and resources put towards attracting international financial services firms and FinTechs to domicile within their respective countries, with little impetus shown towards looking internally to develop a vibrant, innovative ecosystem from the outset.

There are several challenges to the development of FinTech-conducive ecosystems in Bahrain and the UAE.

Lack of Local Talent and Required Skillsets

One of the leading reasons—if not the primary reason—behind efforts to look externally is the lack of local talent and skillsets that would help to propel the FinTech ecosystem in both countries. Multiple stakeholders informed us the required skillsets needed for the development of FinTech solutions is lacking or requires further development. Also, local individuals are drawn more towards opportunities within the traditional financial services, oil, and health-care sectors, in particular.

This challenge is not unique to the UAE and Bahrain. As a recent report from Bahrain FinTech Bay found, the rise of FinTech ecosystems globally has led to a growing demand for specific skillsets and expertise, the likes of which emerging FinTech hubs are finding hard to meet given growth "outstripping the speed at which educational institutions, financial services, and government entities are adapting to market demands."[65]

In Bahrain, for instance, roughly half of all respondents located outside the Kingdom stated that the greatest anticipated challenge for FinTech firms in Bahrain would be talent recruitment and gaining visibility.[66] Recruitment is difficult within the country, given student preference for business management skills over ICT skills. Currently, the ratio of business management graduates to ICT graduates is 8:1.[67] Finding talent with the requisite finance and technical knowledge remains a significant challenge.

To attract talent to the region and stimulate their FinTech talent pools, both Bahrain and the UAE continue to enact policies to reduce barriers to entry for foreign firms seeking to establish themselves in the two countries. By looking externally, existing challenges in the development of a thriving FinTech ecosystem internally can be reduced, if not eliminated.

65 "Bahrain FinTech Talent Report 2018," Bahrain FinTech Bay, (October 2018), https://www.bahrainfintechbay.com/talent-report.

66 "Bahrain FinTech Ecosystem Report 2018," Bahrain FinTech Bay, (July 2018), https://www.bahrainfintechbay.com/fintech-ecosystem-report.

67 Ibid.

The Cost of Doing Business

One of the bigger hurdles stakeholders brought up in our discussions was dealing with a lot of red tape before launching operations. Amongst other issues, the cost (time and resources) spent dealing with visa requirements, licensing fees, quotas for employee hiring, and square footage requirements were frequently brought up in our discussions.

Recent reports from KPMG[68] shed light on several of these costs and compares Bahrain with the economic free zones of Abu Dhabi (ADGM) and Dubai (DIFC), or the Emirate of Dubai. Below, we provide several comparisons between the cost of doing business for financial services (Table 8) and Information, Communications, and Technology (Table 9) sectors.

Table 8: Cost of Doing Business 2018, Financial Services

	Bahrain	DIFC	ADGM
Average Annual Costs of Operations (2018)			
Annual Licensing Fee*	$15,920	**$40,000**	**$30,000**
Commercial Rent**	$91,200	$253,200	$232,800
Human Capital***	$1,580,160	$2,341,260	$2,341,260
Average Annual Costs of Living (2018)			
Residential - 3 Bedroom Villa****	$33,000	**$55,440**	**$48,120**
Education*****	$11,636	$21,595	$15,321
Cost of Living Index******	59.1	73.4	63.8
	Bahrain	**UAE**	
Work and Visit Visa Tariffs (2018)			
Work Visa Package	$849	**$905**	
Visit Visa Charges	$24 (single); $77 (multiple)	$89 (single); $176 (multiple)	

*Notes: * Set-up costs for dealing in investments as principal; ** Occupancy costs for 20 workstations in Financial Harbour, Gate Village, and Sowwah Square in Bahrain, Dubai, and Abu Dhabi, respectively; *** Adapted from KPMG. Cost to Company for 1 CXO, 2 Heads of Department, 2 Directors, 5 Managers, and 10 Analysts; **** Based on rental for a semi-furnished 3-bedroom villa; ***** Education cost for a K-12 American curriculum for one child; ****** Index calculated by comparing the covered jurisdictions with New York as a base (100)*
Source: KPMG, The cost of doing business in Bahrain—Financial Services.

68 "Cost of Doing Business in Bahrain - Financial Services," KPMG, (May 2018), https://assets.kpmg/content/dam/kpmg/bh/pdf/6/kpmg-cost-of-doing-business-financial-services-may-2018.pdf.

Table 9: Cost of Doing Business 2018, ICT[69]

	Bahrain	DIFC	GCC (Avg.)
Average Annual Costs of Operations (2018)			
Annual Licensing Fee*	$928	**$950**	**$1,049**
Commercial Rent**	$43,800	$97,400	$86,480
Manpower Cost***	$849,607	$1,145,463	$895,608
Average Annual Costs of Living (2018)			
Residential - 3 Bedroom Villa****	$33,000	**$48,120**	**$42,198**
Education*****	$11,636	$21,595	$16,243
Cost of Living Index******	59.1	73.4	60.9
	Bahrain	**UAE**	
Work and Visit Visa Tariffs (2018)			
Work Visa Package	$583	**$905**	
Visit Visa Charges	$24 (single); $77 (multiple)	$89 (single); $176 (multiple)	

*Notes: * Application fees for registration with the regulator as an ICT firm (software publishing); ** Occupancy costs for 20 workstations in commercial office building; *** Adapted from KPMG. CCost to company wages for 2 Directors, 4 IT Managers, 4 IT Analysts, 4 Network Administrators, and 6 Customer Service Representatives; **** Based on rental for a semi-furnished 3-bedroom villa; ***** Education cost for a K-12 American curriculum for one child; ****** Index calculated by comparing the covered jurisdictions with New York as a base (100)*
Source: KPMG, The cost of doing business in Bahrain—Information, Communications, and Technology.[70]

Officials in both Bahrain and the UAE are aware of these challenges and have initiated several changes and new approaches to enhance their attractiveness to international corporate and financial services firms seeking to develop and launch products and services to the wider region.

69 Abu Dhabi, nor its financial free zone, ADGM, were included in this study. Also, the study focuses on the Emirate of Dubai, not DIFC.

70 "Cost of Doing Business in the GCC - Information, Communications and Technology," KPMG, (May 2018), https://bahrainedb.com/app/uploads/2017/06/KPMG-Cost-of-Doing-Business-ICT-May-2018.pdf.

In late 2018, the UAE Cabinet approved a new long-term visa for international investors and professional talents,[71] granting access for up to 10 years, five-year residency visas for students studying in the UAE, and 10-year visas for "exceptional students." The Cabinet also abandoned decades of foreign ownership restrictions by allowing up to 100 percent foreign ownership in certain UAE companies based on approved sectors and economic activities.[72,73]

Among the financial free zones, the ADGM and DIFC have been active over the past year in driving a flexible regulatory regime to further enhance their positions as leading financial hubs in the region.

Last year, the DIFC proposed a new employment law that takes into account comparable regimes in other jurisdictions and developments in English Employment Law and employment considerations in the UAE. Officials also announced several strategic initiatives aimed at cementing Dubai's status as a competitive business destination and top financial services hub in the MEASA region, including attracting greater foreign direct investment from Southeast Asia. Separately, the DIFC is in the process of enacting new legislation covering leasing laws and regulations in the DIFC to align better with international best practice.[74]

In ADGM, officials within the past year launched a new sector-agnostic and highly flexible commercial license for ADGM startups. Officials also announced a consultation paper setting out amendments to employment regulations within the financial free zone, including a temporary work permit allowing individuals seconded from other jurisdictions or outsourced from non-ADGM entities to work officially in the free zone.

These are just a few examples of efforts undertaken by regulatory officials over the last several years. In supplemental research, we provide additional detail as to the volume and types of reforms pursued by both Bahrain and the UAE to make their

71 These include specialists involved in research and technical fields, and innovators.

72 "UAE Cabinet Approves New Long-Term Visa for International Investors and Professional Talents... And 100% Investors' Ownership by Year End," The UAE Cabinet, (May 21, 2018), https://uaecabinet.ae/en/details/news/uae-cabinet-approves-new-long-term-visa-for-international-investors-and-professional-talents-and-100-investors-ownership-by-year-end.

73 The announcement of this change was made in late 2018. However, the UAE Cabinet clarified the sectors and activities that this ruling would apply to in a July 2019 press release. That press release can be viewed here: https://uaecabinet.ae/en/details/news/uae-cabinet-adopts-economic-activities-eligible-for-up-to-100-foreign-ownership.

74 In July 2019, the DIFC announced four new licensing categories and fees. Included in the list of categories are “Restricted Licenses.” The licenses "have been introduced to firms interested in developing or testing new or innovative products and services in the DIFC. Entities obtaining this licence will benefit from a reduced registration fee of US$100, and with annual licence fees ranging from US$1,000 to US$4,000, allowing more flexibility for innovation, testing and access to the DIFC ecosystem which includes incubator and accelerator programmes." The DIFC press release can be viewed here: https://www.difc.ae/newsroom/news/difc-continues-prioritise-ease-doing-business-introduction-new-licencing-categories-fees/.

countries more attractive for foreign firms and startups.

Utilization of Tools and Platforms Within the FinTech Ecosystem

Over the past few years, both Bahrain and the UAE have made great strides in developing a conducive ecosystem for FinTech development and proliferation through the utilization of regulatory tools, as well as fostering a collaborative FinTech ecosystem through the launch of two prominent accelerators.

Accelerator-Driven Collaborative Ecosystems in Bahrain and the UAE

Similar to what we have previously written about on FinTech,[75] there is much more focus on collaboration than competition between FinTech startups and incumbents operating in the financial services sector in the region. For instance, in Bahrain, nearly 90 percent of professionals surveyed in a recent report[76] are interested in collaborating or have already collaborated with FinTech firms. In research conducted by Accenture and the DIFC's FinTech Hive,[77] the level of investment in FinTechs seeking to collaborate with incumbents in the financial services sector increased nearly 140 percent in 2017, compared to investment in competitive FinTechs, which increased by only 23 percent.

There are several reasons behind the preference for cooperation rather than competition, including the difficulty of entering and competing in a consolidated, entrenched marketplace and different regulatory frameworks, depending on the regulatory jurisdiction.[78]

To facilitate greater connectivity and coordination between innovative startups and financial services incumbents, several accelerators have launched in Bahrain and the UAE to develop and nurture those connections.

Bahrain FinTech Bay

Launched in February 2018, Bahrain FinTech Bay seeks to "accelerate local early-stage FinTech companies to the next growth stage of commercialization and expedite partnership opportunities; attract foreign growth-stage FinTech companies to establish their regional head-offices in Bahrain and facilitate their go to market

75 In our recent report on InsurTech we found that there is considerable interest among InsurTech firms in collaborating with incumbent insurance carriers. The report can be viewed here: https://www.milkeninstitute.org/reports/insurtech-rising-profile-insurtech-landscape.

76 "Bahrain FinTech Ecosystem Report 2018," Bahrain FinTech Bay, (July 2018), https://www.bahrainfintechbay.com/fintech-ecosystem-report.

77 "Invest, Collaborate, Compete: A $20 Billion Opportunity for Middle East and Africa FinTechs," DIFC FinTech Hive, (2018).

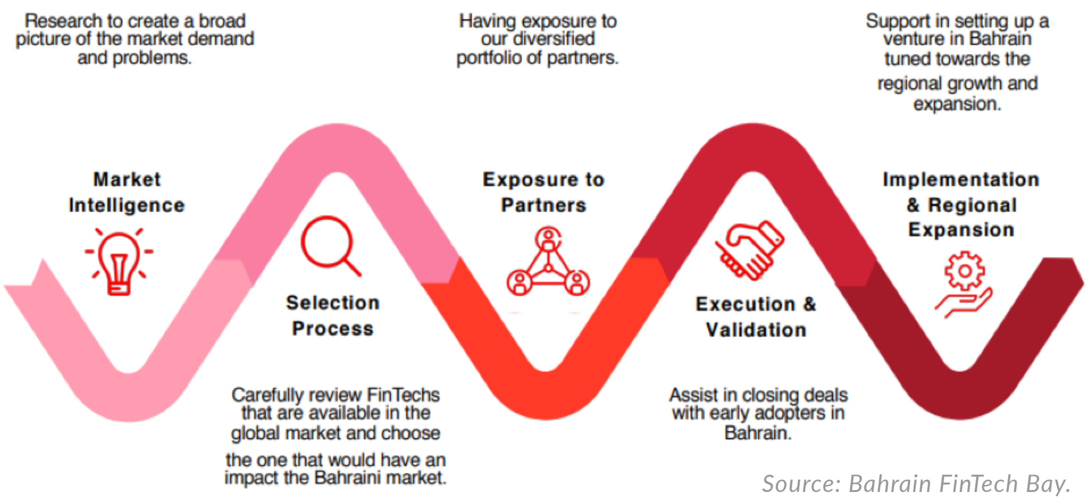
78 In a recent report from S&P Global Ratings, the ratings agency notes that regulators in the region "are likely to protect incumbent financial institutions to an extent from fintech disruption that might compromise financial stability or that could lead to a weaker banking system." As a result, the report also foresees more cooperation between FinTechs and banks than competition. The press release on the report can be viewed here: https://www.spglobal.com/marketintelligence/en/news-insights/trending/3lt4JDcmG65JcooyFmiLQg2.

approach into GCC; and accommodate FinTech companies to accelerate their customer acquisition and scale their product and services offering through our partner ecosystem."[79]

Founding partners include some of the more well-known tech and financial services firms from the region and around the globe. They include InvestCorp, Microsoft, NBB, Roland Berger, American Express, BNP Paribas, Cisco, Bahrain Insurance Association, Arcapita, Al Salam Bank, Ahli United Bank, Bahrain Islamic Bank, and more. In all, Bahrain FinTech Bay has roughly 30 founding partners.

Bahrain FinTech Bay is one of several FinTech Bays with additional locations in Detroit, Silicon Valley, and Singapore. The geographic spread of these Bays provides Bahrain FinTech Bay with a globally connected ecosystem for incumbents and startups to connect and gain exposure (see Figure 7).

Figure 7: Bahrain FinTech Bay Venture Acceleration Program



Source: Bahrain FinTech Bay.

DIFC FinTech Hive

Launched in January 2017, the DIFC FinTech Hive (known as Hive) seeks to foster and promote innovation in the region and bring cutting-edge financial services technologies to the Middle East through the first-of-its-kind accelerator program in the region. Hive's corporate partners include Accenture, AIG, AWS, First Abu Dhabi Bank, Microsoft, Emirates Islamic Bank, HSBC, Visa, Standard Chartered, MetLife, Cigna, AXA, Zurich, and Finablr.

Hive provides flexible co-working spaces and access to a financial community of more than 22,000 professionals. Hive offers participation in a dynamic 12-week accelerator program where startups can test and develop their solutions under the mentorship of representatives from leading banking and insurance institutions.

79 Bahrain FinTech Bay, "Capabilities," https://www.bahrainfintechbay.com/capabilities.

Importantly, cohorts are selected according to local industry needs, with incumbent financial institutions heavily involved in the makeup of each cohort.

Since its launch, Hive has welcomed two cohorts of firms and recently opened applications to its third cohort. In Table 10, we break down the three cohorts further.

Table 10: Breaking Down the DIFC FinTech Hive Cohorts

Cohort	About
2019[80]	- 33 firms selected from 425 applicants[81] - Three-month program kicks-off September 2019 - 21 partner institutions providing mentorship[82] Partners interested in FinTech (credit scoring, customer acquisition, onboarding, cybersecurity, data analytics) Partners interested in InsurTech (data aggregation, connectivity, customer journey)
2018[83]	- 22 firms selected from 300+ applicants Expansion of the program's scope to include InsurTech, RegTech, and Islamic FinTech[84] 50% of applicants were FinTech, 20% were InsurTech, 15% were Islamic FinTech, and 15% were RegTech - 21 partner institutions providing mentorship - 68% (15) of the selected firms were from the MENA region, of which 80% (12) were from the GCC, including 9 firms from the UAE

80 "Third Cohort of DIFC FinTech Hive Accelerator Programme Applications Opened," Dubai International Financial Centre, (April 3, 2019), https://www.difc.ae/newsroom/news/third-cohort-difc-fintech-hive-accelerator-programme-applications-opened/.

81 The DIFC FinTech Hive received applications from 425 startups operating in the RegTech, Islamic FinTech, InsurTech, and broader FinTech universe for the third cohort. This is a 42 percent increase from the 2018 program. "Approximately half of the applications received for the 2019 programme originated from the Middle East, Africa and South Asia," according to the DIFC. The press release can be viewed here: https://www.difc.ae/newsroom/news/difc-boosts-uae-financial-sector-development-and-reports-significant-growth-during-first-half-2019/.

82 FinTech, InsurTech, RegTech, or Islamic FinTech startups test and develop solutions under the mentorship of leading banking and insurance institutions, participate in pitch events with leading financial services partners in the UAE, Saudi Arabia, and Jordan, have access to investor networks, including the DIFC's $100 million FinTech Fund, co-working space, and fast-tracked application process to the DFSA's regulatory sandbox regime, among other benefits.

83 "Fintech Hive Welcomes 22 Innovative Startups for its 2018 Accelerator Programme," *Dubai International Financial Centre FinTech Hive*, (September 4, 2018), https://fintechhive.difc.ae/events-news/Fintech-Hive-Welcomes-22-Innovative-Startups-for-its-2018-Accelerator-Programme.

84 In this report, we did not focus on Islamic FinTech opportunities in the UAE and Bahrain. However, there are several documents that are worth reviewing. They include: *Islamic Fintech Report 2018: Current Landscape & Path Forward*, by the Dubai Islamic Economy Development Centre and DinarStandard; *Dubai: The Capital of the Islamic Economy*, by the Dubai Islamic Economy Development Centre.

Table 10: Breaking Down the DIFC FinTech Hive Cohorts Continued

Cohort	About
2017[85,86]	- 11 firms selected from 100+ applicants from 32 countries Concepts covered included big data and analytics, the blockchain, payments, peer-to-peer and crowdfunding, robo-advisors, and mobility - Firms met with the accelerator's financial institution partners, strategic partners (Dubai Islamic Economy Development Centre and the UAE Exchange) - 27% (3) of the selected firms were from the MENA region, of which 18% (2) were from the GCC. Both GCC-based firms are located in the UAE.

Source: Milken Institute.

Adoption of Regulatory Sandbox Models

Beyond facilitating regulatory networks to develop the region into a globally interconnected FinTech hub, Bahrain and the UAE have launched regulatory sandboxes to attract international firms to their respective countries.

For those unfamiliar, regulatory sandboxes provide both innovative startups, mature growth firms, and financial services incumbents the opportunity to test their product or service in a controlled setting without being subject to the full panoply of applicable regulation. The sandbox provides firms the opportunity to showcase their innovations to the regulator and engage early and often with it, and provides regulators with the opportunity to reassess legacy regulatory frameworks in light of the information received from each test. In 2016, the UK's Financial Conduct Authority was the first financial services regulator to launch a regulatory sandbox. Since then, regulators in more than 50 jurisdictions have implemented or are planning to implement regulatory sandboxes.[87]

Roughly a year after its launch, ADGM announced in November 2016 the first regulatory sandbox in the MENA region, ADGM RegLab. By mid-2017, both the DFSA and the Central Bank of Bahrain (CBB) rolled out their own sandbox regimes.[88] All of these efforts are in line with the strategic objectives and visions announced by both free zone and national authorities.

85 "FinTech Hive at DIFC Commences Inaugural Accelerator Programme," *Dubai International Financial Centre FinTech Hive*, (August 21, 2017), https://fintechhive.difc.ae/events-news/FinTech-Hive-at-DIFC-Commences-Inaugural-Accelerator-Programme.

86 "FinTech Hive at DIFC' receives over 100 applications from more than 32 countries," *Dubai International Financial Centre FinTech Hive*, (May 30, 2017), https://fintechhive.difc.ae/events-news/FinTech-Hive-at-DIFC-receives-over-100-applications-from-more-than-32-countries.

87 UNSGSA FinTech Working Group and CCAF, "Early Lessons on Regulatory Innovations to Enable Inclusive FinTech: Innovation Offices, Regulatory Sandboxes, and RegTech," Office of the UNSGSA and CCAF: New York, NY and Cambridge, UK, https://www.unsgsa.org/files/2915/5016/4448/Early_Lessons_on_Regulatory_Innovations_to_Enable_Inclusive_FinTech.pdf.

88 Recently, the Emirates Securities and Commodities Authority announced its own sandbox, becoming the first mainland regulator in the UAE to announce a sandbox regime. However, we understand from our discussions that changes to current law are needed in order for the sandbox to take full effect.

It is important to note, especially for those unfamiliar with regulatory sandboxes, that no two sandboxes are the same due to different internal policies, regulatory requirements, and reasons for launching a sandbox.[89] Similarly, we are also beginning to see regulatory sandboxes evolve from an across-the-board focus on FinTech to focusing on specific verticals, depending on the regulatory authority.[90]

In Table 11 we provide a closer look at each sandbox model.[91]

89 Several reports attempt to differentiate the various sandbox models. See: Schan Duff, “Regulatory Sandboxes: Modernizing Digital Financial Regulation,” Aspen Institute, July 2017; Jonah Crane, Michael Meyer, Alex Fife, Thinking Inside the Sandbox: An Analysis of Regulatory Efforts to Facilitate Financial Innovation, RegTechLab, June 2018; Jackson Mueller, FinTech: Considerations on How to Enable a 21st Century Financial Services Ecosystem, Milken Institute, August 2017; Jackson Mueller, Dan Murphy, Michael Piwowar, Milken Institute Comment Letter in Response to the Global Financial Innovation Network (GFIN) Consultation Document, Milken Institute, October 2018.

90 In Hong Kong, the Monetary Authority, the Insurance Authority, and the Securities and Futures Commission have announced their own, separate, regulatory sandboxes. In a recent paper, the Milken Institute also identified several regulatory sandboxes specifically focused on insurance/insurtech models, applications, and services. The paper, InsurTech Rising: A Profile of the InsurTech Landscape, can be viewed here: https://www.milkeninstitute.org/reports/insurtech-rising-profile-insurtech-landscape.

91 This is a high-level overview of each sandbox and, as a result, may not include all the information.

92 ADGM, "RegLab: World's Second Most Active Regulatory Sandbox," https://www.adgm.com/setting-up/reglab/overview.

93 “ADGM launches digital sandbox to support fintech innovation," Retail Banker International, (September 19, 2018), https://www.verdict.co.uk/retail-banker-international/news/adgm-launches-digital-sandbox-support-fintech-innovation/.

94 "Abu Dhabi Global Market Initiates World's First Cross-Border FinTech Digital Sandbox Test Successfully," Abu Dhabi Global Market, (November 14, 2018), https://fintech.adgm.com/abu-dhabi-global-market-initiates-worlds-first-cross-border-fintech-digital-sandbox-test-successfully/.

95 Dubai Financial Services Authority, Innovation – the DFSA and Financial Technology, https://www.dfsa.ae/FinTech.

96 Dubai Financial Services Authority, FinTech - Frequently Asked Questions, http://dfsa.ae/Documents/Fintech-Resources/FinTech-FAQ-20181018.pdf.

Table 11: Sandbox Models in Bahrain and the UAE

CBB (Bahrain)	**REGULATORY SANDBOX** **Launched**: June 2017 **Participants**: CBB-licensed financial institutions and other firms (local and foreign) **Duration**: Up to nine months with a maximum three-month extension **Eligibility**: A solution must be truly "innovative" or significantly differ from existing offerings, or offer a new use for existing technologies; must offer identifiable direct and indirect benefits to customers; must show well-developed regulatory testing plans and sufficient safeguards; among other requirements. Participants may not be welcome if the firm has no intention to deploy the solution in Bahrain on a broader scale **Guardrails**: Participants can test their product or service with up to 100 volunteer customers. Transaction amounts and the volume of transactions are determined on a case-by-case basis **Cost**: Application fee of BD 100
ADGM (UAE)	**REGLAB92** **Launched**: November 2016 **Participants**: Startups and existing, regulated firms **Duration**: Participants allowed to operate within RegLab for up to two years and test and develop their solution for commercial launch **Eligibility**: Solution must be innovative and contribute to the development of the financial services sector in the UAE **Guardrails**: FSRA assesses risks posed by each applicant; tailored set of regulatory controls determined on a case-by-case basis. Participants then migrate to full financial services authorized status within the ADGM. Participants who are not ready to launch have to exit the RegLab **Cost**: Incorporation and license fees for a RegLab participant amount to $1,700 in the first year and $700 in the second year **Benefits**: FSRA guidance and support, connections to ADGM partners, allowing participants to integrate their solutions with banking data and functionality via the core banking digital sandbox environment **DIGITAL SANDBOX93** **Announced**: September 2018

Table 11: Sandbox Models in Bahrain and the UAE Continued

ADGM (UAE)	**DIGITAL SANDBOX CONTINUED93** **Benefits**: Sandbox is a partnership with the ASEAN Financial Innovation Network to connect into the global API Exchange (APIX) platform. It is a cloud-based marketplace allowing startups and incumbent financial institutions to connect and test solutions, particularly from the MENA and Asia-Pacific region. The sandbox provides participants with the opportunity to scale and expand globally through an online digital platform enabled by open APIs. It also provides the FSRA with an opportunity to use the digital sandbox to supervise and test the activities of RegLab participants in real time (RegLab 2.0) **Other**: In November 2018, ADGM announced the world's first cross-border test utilizing the APIX platform. In the test, Anglo-Gulf Trade Bank, an ADGM-registered firm, extended trade finance to a Singapore-based seller of goods. The bank used the Digital Sandbox to source FinTech startups to perform due diligence on the Singapore-based seller[94]
DFSA (UAE)	**INNOVATION TESTING LICENSE95,96** **Launched**: May 2017 **Participants**: Startups and regulated incumbents. Participants operate in a controlled and restricted environment without being subject to full regulatory requirements **Duration**: Once provided with an Innovation Testing License (ITL), participants will be allowed to operate for 6 to 12 months, with possible extension to 24 months **Eligibility**: Based on whether the firm is offering an innovative activity that amounts to a financial service, whether it's ready to test this service with customers or industry, and what the product rollout looks like after completion of the testing phase. Firms must be located in the DIFC, comply with UAE federal laws, and act in accordance with regulatory expectations and objectives **Guardrails**: DFSA officials will work with each accepted applicant to determine which rules will apply during the testing period, including the issuance of waivers or modifications **Cost**: DFSA will charge a maximum of $5,000 per license per year. The charge will only apply once the DFSA accepts an ITL application. After a firm migrates to a full license, normal DFSA fees set in

Source: Milken Institute.

As the Milken Institute has written in the past, there are both challenges and opportunities associated with regulatory sandbox implementation.[97] In speaking with regulatory authorities from the ADGM, DIFC, and Central Bank of Bahrain, the Institute compiled a list of takeaways covering sandbox developments.[98]

97 Jackson Mueller, "FinTech: Considerations on How to Enable a 21st Century Financial Services Ecosystem," Milken Institute, (August 2017), https://www.milkeninstitute.org/sites/default/files/reports-pdf/WP-080317-Considerations-on-How-to-Enable-a-21st-Century-Financial-Services-Ecosystem.pdf.

98 It is important to note that not every takeaway pertains to all three regulatory authorities.

1. Innovation efforts, particularly in the UAE, are driven by regulatory officials who were former innovation leads at regulatory bodies in other countries. Considering where several innovation leads in ADGM and DIFC come from, it is not surprising that we continue to see significant movement on regulatory sandboxes in the UAE financial free zones. Several FSRA and DFSA officials we spoke to were formerly involved in developing and directing innovation initiatives at the UK Financial Conduct Authority or the Monetary Authority of Singapore—two regulatory authorities that have spearheaded regulatory approaches to FinTech.

2. Free zone regulators are unencumbered by legacy frameworks. DIFC was established in 2004, and ADGM is only four years old. As such, the regulatory authorities operating within these financial free zones do not face significant constraints on their operations from legacy legal or regulatory frameworks. As such, officials in both the ADGM and DIFC have a remarkable opportunity to adapt to and readjust their policies to envision what the next generation of financial services will look like and how it should be governed. The UAE Central Bank is just beginning to get more involved in FinTech-related activity, and both the financial free zones and Central Bank continue to engage with each other from time-to-time on FinTech-related matters. Regulators will often share lessons learned during the Sandbox process with the Central Bank.

3. A top-down, government-driven approach to fostering and promoting innovation has led to industry confusion and uncertainty. We previously discussed how efforts to foster a FinTech ecosystem in the UAE and Bahrain are largely driven by regulatory authorities, not industry. This top-down approach has resulted in startups and incumbents holding back on potentially innovative activity until they receive an "all-clear" from the relevant regulatory authority. As such, a regulatory sandbox is seen as a way to provide greater certainty to incumbent firms and startups, and address the challenge of permission-based economic activity.

4. Despite entry challenges, international applicants far outnumber regional, local applicants. Regulators have seen significant interest from startups and incumbents outside the region, particularly from the US, Europe, and Southeast Asia. Several officials in the UAE mentioned that local startups are largely technology solution providers to incumbent financial institutions and, as such, do not need to enter a sandbox due to operating in a non-regulated capacity.

5. International applicants face considerable challenges at the start. Several officials described the difficulty faced by international firms in applying and moving through the sandbox process. Startups, in particular, may not be acclimated to the environment or have any familiarity with the regulatory frameworks in place. Requirements on firms to have sufficient compliance staff on hand and to be knowledgeable of compliance requirements often hinder applicants at the beginning of the process.

6. Regulators face considerable upfront costs, at least after initial launch. The lack of familiarity with regulatory frameworks among startups and a firm's inability to articulate its business model clearly pose significant resource constraints to regulators overseeing the sandbox process.[99] One regulator discussed how a significant amount of time was spent educating firms about what it means to be regulated and what the expectations are of the regulator. To address this challenge and reduce the number of upfront resources required, the regulator instituted several initiatives including public presentations and engagements, connecting potential applicants with current participants in the sandbox, and the use of accelerator programs to bridge the knowledge gap.

7. Outside forces can affect an applicant's passage through the sandbox. Regulators mentioned several challenges participants face before being able to move along in the sandbox process, including finding office space, obtaining a business license, and securing a bank account.

8. Not every participant receives a license. Few participants in the sandboxes mentioned above have successfully graduated. There are several reasons for this, including long testing timeframes, companies determining the region is not well suited to their product or service, inability to graduate due to regulations not being in place to allow the firm to exit, or participants deciding to partner with an existing financial entity by becoming a technology services provider, which carries different regulatory treatment compared to stand-alone FinTech firms.

9. Regulators maintain a controlled messaging environment. Several regulators mentioned that they require firms participating in the sandbox process to disclose participation in the sandbox in any subsequent media releases. Additionally, sandbox participants must receive approval from the regulator before issuing any publication or report during the sandbox process. One regulator, in particular, only discloses the types of business models included in the cohort, not the companies themselves.

10. In implementing sandbox frameworks, it is difficult to determine what success looks like and how to measure. The regulators we spoke to did not mention a standardized set of metrics used in determining how "success" is measured for the sandbox. One regulator noted that simply bringing better technology to the region and helping international players understand the region could be considered a success. Others discussed the difficulty in determining whether the technology is being deployed and if customers are using it after an applicant graduates. Still others stated they might not keep track of firms once they leave or graduate the sandbox, including whether the firm was acquired, partnered with existing financial institutions, or left the region.

99 According to the Consultative Group to Assist the Poor and the World Bank Group, the cost associated with running a regulatory sandbox could reach as high as $1 million, depending on the jurisdiction. Results from the survey can be viewed here: https://www.cgap.org/blog/running-sandbox-may-cost-over-1m-survey-shows.

However, we are beginning to hear of some early successes from the sandbox process as it relates to adapting regulatory frameworks to address new technologies. For instance, officials at ADGM stated that the learnings from some firms operating in the ADGM RegLab influenced the design of ADGM's crypto-asset regime. Similarly, the findings and feedback generated from testing Tarabut Gateway's open banking solutions with incumbent financial institutions aided the Central Bank of Bahrain in implementing the country's open banking regime. Tarabut Gateway, a subsidiary of Almoayed Technologies, became the first company to graduate from the CBB's sandbox successfully.

International Collaboration

Beyond implementing conducive regulations and policies to attract international firms to the region, several of the stakeholders listed in Table 2 continue to connect with regulators from around the world not only to exchange best practices and knowledge as they relate to FinTech developments, but also to help enable startups or mature growth firms in one jurisdiction expand into other jurisdictions (see Figure 8).

As seen in Appendix 4, several of these stakeholders have established FinTech bridges[100] with a number of prominent regulators and government bodies in the global FinTech space, including:

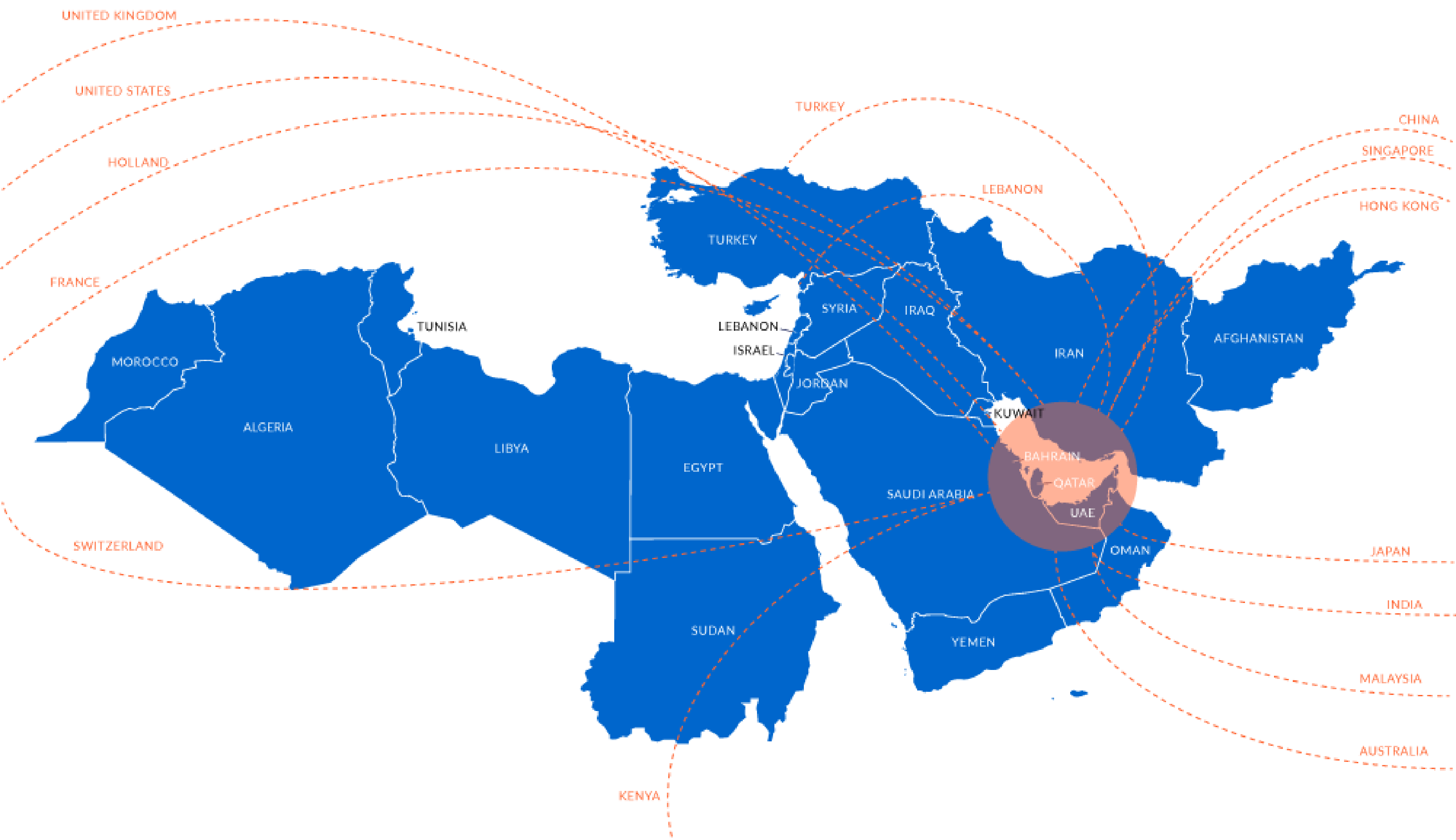
- Abu Dhabi Global Market (FSRA)
- Australian Securities and Investments Commission
- Autorité des Marchés Financiers (France)
- Bahrain Economic Development Board
- Central Bank of Bahrain
- Dubai Financial Services Agency
- Financial Services Agency of Japan
- Hong Kong Insurance Authority
- Hong Kong Monetary Authority
- Hong Kong Securities and Futures Commission
- Kenya Capital Markets Authority
- Lebanon Capital Markets Authority
- Maharashtra Government
- Malaysia Securities Commission
- Monetary Authority of Singapore
- Qianhai Authority
- Emirates Securities and Commodities Authority

These so-called FinTech bridges are memorandums of understanding (MoUs) between two or more regulatory authorities. These agreements often include information sharing between regulators, best practices in the regulation and oversight of FinTech, open dialogue and in-person engagements, and regulatory support behind FinTechs seeking to extend their operations to external markets.

100 This is a list of regulatory authorities that regulatory authorities in the UAE and Bahrain have signed agreements with. Appendix 4 breaks down the partnerships further by regulatory agency.

Bridges between regulatory authorities and jurisdictions are not uncommon, and regulators have been active in signing MoUs covering FinTech policy for the last few years. In particular, the Monetary Authority of Singapore and the UK Financial Conduct Authority are the top two regulators in establishing meaningful FinTech bonds with other regulatory bodies around the world using these bridges. As of November 2018, more than 60 FinTech bridges have been established between various regulatory authorities around the world.

Figure 8: Mapping FinTech Bridges



Source: Milken Institute.

Another type of bridge we are beginning to see in the UAE is the establishment by the financial free zones of representative offices in other countries. For example, in May 2018, ADGM established its first representative office in Beijing to strengthen ADGM's relations with Chinese authorities and the country's financial and business communities, and to support China's Belt-and-Road Initiative.[101,102] The office is already being put to good use with the recent announcement of a partnership struck by ADGM and OneConnect Financial Technology, a subsidiary of Ping An Group, on the sidelines of the UAE-China Economic Forum held in Beijing in July 2019.[103]

Beyond one-to-one connections, we are also seeing multi-jurisdictional bridges being developed, an initiative of which Bahrain and the UAE are a part. Earlier this year, the Global Financial Innovation Network (GFIN)[104] launched not only to provide a framework for cooperation between financial services regulators on FinTech-related issues but also to address various challenges impacting startups and mature growth platforms from offering financial services and products across borders.

The Central Bank of Bahrain, the Dubai Financial Services Authority, and the Abu Dhabi Global Market are three participants in a network composed of 35 organizations and regulatory bodies from around the world. All three regulatory bodies are also involved in separate cross-border pilots. In fact, of the eight cross-border pilot tests announced so far, Bahrain and the UAE are involved in half of them. Table 12 provides an overview of the relevant tests.

101 Sarmad Khan, "ADGM opens office in Beijing to court second-largest global economy," The National, (May 12, 2018), https://www.thenational.ae/business/economy/adgm-opens-office-in-beijing-to-court-second-largest-global-economy-1.729663.

102 According to the UAE Ministry of the Economy, the UAE's non-oil trade with China amounted to $43 billion in 2018. The UAE accounts for nearly 30 percent of Chinese exports to Arab countries. Further details on the trade relationship can be viewed here: http://www.wam.ae/en/details/1395302775671.

103 From the agreement, both OneConnect and ADGM "will assist Chinese FinTech community to tap on ADGM as their platform to develop, test and launch innovative FinTech products, services and business solutions in Abu Dhabi and MENA markets along the Belt-and-Road route." Further information on the agreement can be read here: https://www.adgm.com/media-center/announcement-listing-page/media-releases/adgm-and-oneconnect-of-ping-an-collaborate-on-fintech.

104 "Global Financial Innovation Network (GFIN)," UK Financial Conduct Authority, (August 9, 2019), https://www.fca.org.uk/firms/global-financial-innovation-network.

Table 12: GFIN Cross-Border Pilot Tests Involving Regulators from Bahrain or the United Arab Emirates*

Firm	Proposed Test	Regulators Involved
Ascent RegTech	AI-driven RegTech solution that automatically maps a customer's specific regulatory obligations and ongoing rule changes, while also enabling end-to-end compliance management. The product helps firms see similarities and differences in regulatory obligations across regulators and countries.	Australian Securities & Investments Commission (ASIC), Autorité des Marchés Financiers (AMF Québec), **Dubai Financial Services Authority (DFSA)**, Financial Conduct Authority (FCA), Hong Kong Monetary Authority (HKMA), and Ontario Securities Commission
ATLANT	Digital securities platform offering primary issuance of digital shares and debentures, secondary trading and optimized post-trade, with automatic clearing, settlement, and custody.	**Central Bank of Bahrain (CBB)**, Monetary Authority of Singapore, Jersey Financial Services Commission, and Bank of Lithuania
Starling Trust	Applied behavioral sciences technology company that has developed a predictive behavioral analytics platform using machine learning and electronic communications data to allow users to measure, manage, and mitigate culture and conduct risks. They will be partnering with a select group of global banks, with an initial focus on the three lines of defense risk framework.	ASIC, **DFSA**, FCA, and HKMA
Tradle	A blockchain-based KYC and onboarding platform that uses AI, Internet of Things, and the Cloud to help financial institutions meet regulatory obligations for small to medium-sized enterprises (SMEs), corporates, capital markets, wealth management, retail, and unbanked customers and helps regulators provide guidance and supervision for their markets. They will work with GFIN on self-executing cross-border KYC policies.	**Abu Dhabi Global Market (ADGM)** and FCA

*Note: * Bolded regulators operate in Bahrain or the UAE.*

Source: "GFIN Cross-Border Testing Pilot— Next Steps," UK Financial Conduct Authority.

Like regulatory sandboxes, these types of bridges are just one tool in the regulatory toolkit[105] that can help address several challenges regulatory agencies face in approaching and/or adopting new technologies while continuing to lay the groundwork for the development of a FinTech hub for the region.

CONCLUSION

We have witnessed an explosion of FinTech-related activity in Bahrain and the UAE over the past two years. Government-initiated efforts to diversify their economies beyond a dependence on government spending and the energy sector is leading officials in both countries to establish a welcoming legal and regulatory environment for FinTech startups and mature growth platforms through forward-thinking policies. An important part of this strategy is creating an enabling environment capable of attracting and supporting foreign firms within their respective countries. The knowledge transfer expected to result from this will drive the development of a vibrant, local FinTech ecosystem. Both Bahrain and the UAE, however, are still early on in their efforts to develop into *the* FinTech hub in the region. Other countries in the MENA region are catching up, and time will tell if the strategic initiatives and FinTech-related efforts that have brought Bahrain and the UAE to where they are today ultimately prove successful in creating a vibrant FinTech ecosystem.

105 Daniel Gorfine and Chris Brummer, "FinTech: Building a 21st-Century Regulator's Toolkit," Milken Institute, (October 2014), https://assets1b.milkeninstitute.org/assets/Publication/Viewpoint/PDF/3.14-FinTech-Reg-Toolkit-NEW.pdf.

APPENDICES

Appendix 1: Central Bank of Bahrain (CBB) List of Approved Regulatory Sandbox Companies106

(Sorted by authorization date to join the sandbox)

Company	Country of Origin	Type (According to CBB)	Authorization Date
Rain Financial	Bahrain	Money Changer	September 25, 2017
BitArabia Digital Assets	Bahrain	Exchange	December 27, 2017
Belfrics	Malaysia	Exchange	December 27, 2017
Wahed	USA	Investment Advisor	December 27, 2017
Nurture Middle East	Bahrain	Account Aggregation Platform	March 22, 2018
CapitaWorld	India	Loan Automation Platform	April 15, 2018
Arabianchain Technology	UAE	Exchange	May 31, 2018
Payment International Enterprise	Bahrain	Mobile Microfinance	June 26, 2018
OneMena	Hong Kong	Exchange	July 12, 2018
Haseed	UK	Investment Advisor	July 12, 2018
BitOasis Technologies	UAE	Exchange	July 12, 2018
MenaPay	Turkey	Payment Service Provider	August 16, 2018
Pyypl	UAE	Card Processing	September 10, 2018
Hong Kong Iapppay Information Technology	Hong Kong	Exchange	September 13, 2018

106 "FinTech & Innovation: Regulatory Sandbox Register," Central Bank of Bahrain, https://www.cbb.gov.bh/fintech/.

Company	Country of Origin	Type (According to CBB)	Authorization Date
Sprinkle Xchange	Luxembourg	Stock Exchange	October 17, 2018
COCOA Invest	Denmark	Investment Advisor	November 5, 2018
Vogue Web Solution (Vogue Pay)	Nigeria	Payment Service Provider	November 19, 2018
Cyberblock	Japan	Asset Management Platform	November 19, 2018
Verify	Bahrain	Payment Service Provider	November 19, 2018
Basket	UAE	Cryptocurrency ATM	November 21, 2018
Hubuc Solutions	Spain	Open Banking Solutions	November 25, 2018
Fuzhou Wangle Network Technology (Wonder News)	China	Cryptocurrency Exchange	December 4, 2018
Stronghold	New Zealand	Payment Platform	December 31, 2018
Chen En (Hawala Wallet)	China	Cryptocurrency Trading Platform	December 31, 2018
Global Primex	Republic of Mauritius	Payment Solution	January 30, 2019
Bitcove	Ireland	Cryptocurrency Exchange	February 11, 2019
ZPX	Singapore	Cryptocurrency Trading Platform	February 24, 2019
AT Payments	USA	Cryptocurrency ATM	April 18, 2019
NyxPay	Bahrain	Payment Service Provider	April 30, 2019
Denarii Cash	UAE	Remittance Platform	May 27, 2019

Company	Country of Origin	Type (According to CBB)	Authorization Date
KeyBlock	Hong Kong	Cryptocurrency Trading Platform	June 3, 2019
First Lamar	Bahrain	Payment Initiation Service Provider	July 2, 2019
Square Funds	Bahrain	Robo Advisory & Aggregator Platform	July 23, 2019
Solfeh	Jordan	Micro-lending Platform	July 23, 2019

Appendix 2: ADGM RegLab Cohorts

Cohort	About
Cohort 1107	- Announced May 2017 - 11 applicants, five selected - Participants (and country of origin) include Now Money (UAE), Titanium Escrow (UAE), CapitaWorld (India), Rubique (India), and Finalytix (USA) - Themes include data analytics for credit risk assessments, robo-advisory, artificial intelligence in digital ID, financial inclusion, and enhanced operational risk management - Two UAE firms (40% of total)
Cohort 2108	- Announced October 2017 - 22 applicants, 11 selected - Participants include CreditSCRIPT (Mauritius), Chynge (Singapore), Equichain (UK), Halalah (Saudi Arabia), NewBridge (UAE), Nymcard (Lebanon), OKLink (Hong Kong), Pyppl (UAE), Remitr (Canada), Sifr (India), and Yes Money (Italy) - Themes include initial coin offerings and blockchain-enabled payments, settlements, and RegTech solutions - Two UAE firms (18% of total)
Cohort 3109	- Announced September 2018 - 36 applicants, 10 selected - Participants include Accelerated Drawdowns Fin Islamic (UAE), BedouinChain (UAE), BitPesa (Kenya), BlockTrust (UAE), CreditOn (India), Lucid Pay (UAE), Xpence (UAE), World Reserve Trust (UK), XinFin (Singapore), and Yalla Compare (UAE) - Themes include financing, payments, and insurance solutions to benefit the SME sector - Six UAE firms (60% of total)

107 "ADGM Admits First 5 Regional & Intl RegLab Applicants," Abu Dhabi Global Market, (May 16, 2017), https://fintech.adgm.com/adgm-admits-first-5-regional-international-reglab-applicants/.

108 "Abu Dhabi Global Market Admits 2nd RegLab Cohort with 11 More Local & Global FinTech Firms," Abu Dhabi Global Market, (October 22, 2017), https://fintech.adgm.com/abu-dhabi-global-market-admits-2nd-reglab-cohort-with-11-more-local-global-fintech-firms/.

109 "Abu Dhabi Global Market admits 3rd RegLab Cohort with more UAE FinTech firms," Abu Dhabi Global Market, (September 11, 2018), https://www.adgm.com/media-center/announcement-listing-page/media-releases/abu-dhabi-global-market-admits-3rd-reglab-cohort-with-more-uae-fintech-firms/.

Cohort	About
Cohort 4110	- Application period opened March 2019 (Closed April 25) - Themes include the API economy and sustainable finance

Appendix 3: DFSA Regulatory Sandbox Cohorts and Developments

May 2017	- Launched the Innovation Testing License (ITL)
November 2017	- DFSA grants Sarwa Digital Wealth Limited, a digital wealth management platform, in-principle approval for its Innovation Testing License. Sarwa becomes the first FinTech operator to receive the ITL
May 2018	- DFSA expands its ITL program - Six companies will form Cohort 1 - Accepted firms include Bridg (UAE), Delio (UK), Fastnet (UK), HedgeSPA (Singapore), MarketsFlow (US), and Jibrel Network (Switzerland)
January 2019111	- Seven firms accepted into Cohort 2 - Themes inlude green financing, the digitization of bond and sukuk issuances using smart contracts, SME funding platforms, robo-advisors for Islamic finance, and the tokenization of equities and debt issuances[112]
April 2019	- DFSA invites applicants to join its summer cohort - Firms selected will be announced in mid-June
July 2019	- Four firms accepted into the Summer Cohort - Accepted firms "intend to engage in equity crowdfunding with tokenization of the equities, the operation of a blockchain-enabled property crowdfunding platform, and the facilitation of blockchain-enabled supply chain financing."[113]

110 "Abu Dhabi Global Market Opens 4th RegLab Cohort Focusing on the API Economy and Sustainable Finance," Abu Dhabi Global Market, (May 4, 2019), https://fintech.adgm.com/abu-dhabi-global-market-opens-4th-reglab-cohort-focusing-on-the-api-economy-and-sustainable-finance/.

111 "DFSA Regulatory Sandbox Accepts Seven New Firms into its Latest Cohort," Dubai Financial Services Authority, (January 7, 2019), https://www.dfsa.ae/MediaRelease/News/DFSA-Regulatory-Sandbox-accepts-seven-new-firms-in.

112 "DFSA Regulatory Sandbox Accepts Seven New Firms into its Latest Cohort," The Industry Spread, (January 8, 2019), https://theindustryspread.com/dfsa-regulatory-sandbox-accepts-seven-new-firms-latest-cohort/.

113 "DFSA Accepts Four FinTech Firms into its 2019 Regulatory Sandbox Summer Cohort," Dubai Financial Services Authority, (July 2, 2019), https://www.dfsa.ae/MediaRelease/News/DFSA-accepts-four-FinTech-firms-into-its-2019-regu.

Appendix 4: FinTech Bridges and MOUs

Stakeholder	Memorandums of Understanding
Central Bank of Bahrain	- Regulators/Govt: ADGM and Monetary Authority of Singapore - Industry/Supporting Stakeholders: Bahrain FinTech Bay and Le Swave - International: Global Financial Innovation Network
Bahrain Economic Development Board	- Regulators/Govt: ADGM, Maharashtra Government, Istanbul Development Agency, and UK Government - Industry/Supporting Stakeholders: Singapore FinTech Consortium, Trucial Investment Partners, Inellifusion Technologies, IAPPPAY, Softbank China Capital, and Le Swave
Bahrain FinTech Bay	- Regulators/Govt: Central Bank of Bahrain and Bahrain Development Bank - Industry/Supporting Stakeholders: C5 Accelerate, Bahrain Bourse, Bahrain Polytechnic, and Le Swave
ADGM/FSRA	- Regulators/Govt: Bahrain Economic Development Board, Central Bank of Bahrain, UAE Central Bank, Monetary Authority of Singapore, Qianhai Authority, Kenya Capital Markets Authority, Australian Securities and Investments Commission, Financial Services Agency of Japan, Autorite des Marches Financiers (France), Emirates Securities and Commodities Authority, Hong Kong Monetary Authority, Hong Kong Securities and Futures Commission, Abu Dhabi Department of Economic Development, UAE Ministry of Finance, Maqta Gateway (Abu Dhabi Ports subsidiary), Abu Dhabi Smart Solutions & Services Authority, and Beijing Municipal Bureau of Local Financial Regulation - Industry/Supporting Stakeholders: Flat6Labs, New York University (Abu Dhabi), GlassQube Business Centre Services, TechPreneur Africa, Swiss Finance + Technology Association, RFI Foundation, UAE Exchange, Let's Talk Payments, Abu Dhabi Islamic Bank, YES BANK, Mastercard, Al Ansari Exchange, Abu Dhabi Commercial Bank, Plug and Play, Al Fardan Exchange, National Health Insurance Company, Abu Dhabi National Insurance Company, FINTECH Circle, Al Hilal Bank, International Bank for Reconstruction and Development, Emirates Development Bank, Emirates Telecommunications Group, and OneConnect Financial Technology - International: Global Financial Innovation Network and ASEAN Financial Innovation Network
DIFC/DFSA	- Regulators/Govt: Gujarat International Finance Tec-City, Dubai Economy, Dubai Islamic Economy Development Centre, Hong Kong Securities and Futures Commission, Malaysia Securities Commission, Lebanon Capital Markets Authority, Australian Securities and Investments Commission, Hong Kong Insurance Authority, Hong Kong Monetary Authority, Monetary Authority of Singapore, Financial Services Agency of Japan, and the Government of Maharashtra - Industry/Supporting Stakeholders: Startupbootcamp, Paris Europlace, Middle East Venture Partners, Finance Innovation, China Banking Association, and IndUS Entrepreneurs (TiE) Mumbai - International: Global Financial Innovation Network
DIFC FinTech Hive	- Industry/Supporting Stakeholders: Accenture, iE5, SuperCharger, LATTICE80, DICE FinTech Ace, Finance Innovation, Le Swave, B-Hive, Holland FinTech, Bahrain FinTech Bay, and Innovate Finance

ACKNOWLEDGMENTS

We want to thank representatives from the following organizations and authorities for taking the time to meet with us during the Milken Institute's MENA Summit 2019.

The Central Bank of the UAE, the Central Bank of Bahrain, Bahrain FinTech Bay, FinTech Galaxy, Almoayyed Technologies, MENA FinTech Association, Bahrain Economic Development Board, Plug and Play Tech Center, Dubai International Financial Centre FinTech Hive, Abu Dhabi Investment Authority, Dubai Financial Services Authority, Abu Dhabi Global Market Financial Services Regulatory Authority, Finastra, Anglo-Gulf Trade Bank, Clifford Chance, Securrency, and Bayzat.

In addition, we want to thank the participants who took part in several public panel and private roundtable sessions at the MENA Summit 2019 including, MENA: Building the Next FinTech Hub,[114] CEO Roundtable: The Future of Technology and Banking,[115] The Future of High Tech: The Power of a Strong Ecosystem,[116] and The Emergence of Venture Capital Mega-Funds.[117]

We also want to thank the National US-Arab Chamber of Commerce and the Embassy of the Kingdom of Bahrain for the opportunity to join a private roundtable discussion on FinTech opportunities in Bahrain that was held on March 1, 2019, in Washington, DC.[118]

Lastly, we want to thank the following individuals for taking the time to review the paper and provide helpful suggestions and comments: Dan Murphy, former senior associate, FinTech program, Milken Institute Center for Financial Markets; Ragini Chawla, analyst, Milken Institute Center for Financial Markets; Haifa Albedrawi, senior advisor (MENA), Milken Institute; Carole Biau, director, Global Market Development, Milken Institute; and Ben-Ari Boukai, M.S. candidate at Georgetown University, School of Foreign Service.

114 "MENA: Building the Next FinTech Hub," Milken Institute MENA Summit 2019, 50:13, (February 12, 2019), https://www.milkeninstitute.org/videos/mena-building-next-fintech-hub.

115 "CEO Roundtable: The Future of Technology and Banking," Milken Institute MENA Summit 2019, (February 12, 2019), https://www.milkeninstitute.org/events/mena-summit-2019/program?panelTitle=ceo-roundtable-the-future-of-technology-and-banking-invite-only.

116 "The Future of High Tech: The Power of a Strong Ecosystem," Milken Institute MENA Summit 2019, (February 12, 2019), https://www.milkeninstitute.org/events/mena-summit-2019/program?panelTitle=the-future-of-high-tech-the-power-of-a-strong-ecosystem-invite-only.

117 "The Emergence of Venture Capital Mega-Funds," Milken Institute MENA Summit 2019, 51:17, (February 12, 2019), https://www.milkeninstitute.org/videos/emergence-venture-capital-mega-funds.

118 "NUSACC Expert Roundtable: Bahrain Positions Itself to be Top FinTech Destination in the MENA Region," NUSACC, National U.S.-Arab Chamber of Commerce, (March 14, 2019), http://www.nusacc.org/uploads/2/2/9/7/22977530/19bahrain-rtpren-march14-final.pdf.

ABOUT THE AUTHORS

Jackson Mueller is an associate director at the Milken Institute Center for Financial Markets. He focuses on FinTech, capital formation policy, and financial markets education initiatives. Prior to joining the Institute, Mueller was an assistant vice president at the Securities Industry and Financial Markets Association (SIFMA), where he focused on a broad range of financial services-related policies, provided legislative and regulatory updates to executive-level government relations staff, and conducted analysis of key issues relevant to SIFMA's members. He received his bachelor's degree in political science from the University of Richmond and a master's degree in public policy from American University.

Michael S. Piwowar is the executive director of the Milken Institute Center for Financial Markets. Dr. Piwowar served as a commissioner at the US Securities and Exchange Commission (SEC) from August 15, 2013, to July 6, 2018. He was first appointed to the SEC by President Barack Obama and was designated acting chairman of the Commission by President Donald Trump from January 23, 2017, to May 4, 2017. He was previously the Republican chief economist for the US Senate Committee on Banking, Housing, and Urban Affairs under Senators Mike Crapo (R-ID) and Richard Shelby (R-AL) and served as the lead Republican economist on the four SEC-related titles of the Dodd-Frank Act and the JOBS Act. During the financial crisis and its immediate aftermath, Dr. Piwowar served in a one-year fixed-term position at the White House as a senior economist at the President’s Council of Economic Advisers in both the George W. Bush and Barack Obama administrations. Before joining the White House, Dr. Piwowar worked as a principal at the Securities Litigation and Consulting Group. He received a B.A. in foreign service and international politics from the Pennsylvania State University, an M.B.A. from Georgetown University, and a Ph.D. in finance from the Pennsylvania State University.

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