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FinTech Hive at DIFC: Creating a Fintech Ecosystem in Dubai

Our ambition is to help create the first fintech unicorn in the Middle East through FinTech Hive.

- Raja Al Mazrouei, executive vice president, FinTech Hive

In August 2019, Raja Al Mazrouei (HBS AMP 2014), executive vice president of FinTech^a Hive (the Hive) at the Dubai International Financial Centre (DIFC), the first and largest financial technology accelerator in the Middle East, Africa and South Asia region (MEASA), was going over her schedule. Since the founding of the Hive in 2017, Al Mazrouei had spearheaded initiatives to attract both local and global fintech start-ups to the Hive's three-month accelerator program in Dubai. The Hive was envisaged to help regional financial players catch up with their global peers in terms of embedding technology into their services. In 2017 and 2018, the Hive ran an accelerator program and hosted a total of 33 companies, 17 of which were from the MEASA region. (See Exhibit 1 for accelerated startups.) In 2019, 31 of these were in operation and had innovation testing licenses (or had already been fully licensed).

By early 2019, two years after its founding, the Hive had built an ecosystem of more than 60 partners and ranked as the 10th largest Global Fintech Hub and the 3rd biggest Global Islamic Fintech Hub.¹ Thanks to the Hive, Dubai was leading the way in fintech innovation in the Middle East and, and according to market reports, was expected to triple in size as a financial hub in the coming years.² All the while, other accelerator and incubators with similar formats had emerged in the United Arab Emirates (UAE) and elsewhere in the region. How could the Hive differentiate itself in a way that would keep attracting the best startups? The program graduates were growing their businesses, but Al Mazrouei knew there was still a lot to be done. The investment mentality in the region was still quite conservative. Only a few venture capital (VC) funds were operating, and angel investors^b were virtually non-existent. Al Mazrouei was aware that without a continuous stream of funding, it would

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 $^{^{\}mathrm{a}}$ Coined in the 1980s, the term "fintech" referred to the application of new technology and innovation in the financial sector.

^b Angel investor referred to a high net worth individual who provides financial backing for small startups or entrepreneurs, typically in exchange for ownership equity in the company. Akhilesh Ganti, "Angel Investor," Investopedia, August 21, 2019, https://www.investopedia.com/terms/a/angelinvestor.asp, accessed September 2019.

be impossible to keep the startups alive or even keep them in the region; she was aware that they would venture out to geographies with better access to funding. To discourage such a migration, in 2018, the DIFC established a \$100-million investment fund, making the Hive the world's only fintech accelerator with a fintech-dedicated fund. Nonetheless, Al Mazrouei was concerned about the Hive's ability to support the increasing number of fintech startups it had lured to Dubai. She recalled a 2018 meeting with Addenda. Founded in Dubai by two German-Jordanian brothers, Addenda was an insurtech startup that had successfully graduated from the Hive's 2018 accelerator program. The founders had reached out to her as a last resort after being in bootstrapping mode for a long time. She had personally introduced them to angel investors, and she knew she had helped provide a vital lifeline. Addenda, like other Hive graduates, would soon be on the market for another round of funding. Would they succeed? Would the Hive's funds be enough to encourage VCs, financial institutions, and angel investors to join in and invest in early-stage fintech startups to keep them going? How much longer could the Hive shoulder the weight of bolstering the fintech ecosystem in the UAE?

The UAE and the Financial Sector in Dubai

Situated along the eastern coast of the Arabian Peninsula, the UAE was founded in 1971 as a federation of seven emirates:^d Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Fujairah, and Ras al Khaimah.^e It was an oil and gas-rich country with 10% of the world's proven oil reserves, which were concentrated in Abu Dhabi.³ (See **Exhibit 2** for maps.) The federation's economy was dominated by the oil industry, but Dubai was striving to diversify its own economy by building up other industries such as real estate, tourism and finance. In 2004, along with other specialized free zones, the government instituted the DIFC, a free zone that housed financial institutions, finance-related regulatory bodies, and support services.^{f,4} The financial regulatory agency of the DIFC, the Dubai Financial Services Authority (DFSA),^g and the Nasdaq Dubai stock market were established in 2004⁵ and 2005,⁶ respectively.

Over the years, Dubai's diversification efforts, coupled with the city's strategic location, attracted heavy traffic in international business, and with its relatively stable economic and political system, Dubai stood out as a safe haven for financial investments in the Middle East. With the growth in the finance, logistics, and tourism sectors, oil's share in Dubai's GDP decreased from 50% in 1985 to less than 25% of GDP in 1993. In 2009 it was down to 5%. Dubai thus became a vibrant regional commercial

^c A combination of the words insurance and technology, insurtech referred to the use of technology innovations designed to squeeze out savings and efficiency from the existing insurance industry model. Marshall Hargrave, "Insurtech," Investopedia, August 20, 2019, https://www.investopedia.com/terms/i/insurtech.asp, accessed September 2019.

^d The governance of the federation was as follows: the Supreme Council of Rulers, composed of the sheikhs of each emirate, and a president elected for a five-year term. A prime minister also led a council of ministers.

^e Ras al Khaimah joined the federation on 10 February 1972. Ras Al Khaimah, "General Information," https://www.rak.ae/wps/portal/rak/about/ras-al-khaimah/general-information, accessed September 2019.

^f The zone was governed by state law (vs. Islamic law, which stipulated that financial institutions had to abide by Sharia Law, which banned interest-bearing transactions). The DIFC offered opportunities for 100% foreign ownership and a 100% tax exemption for 50 years. By 2019, the DIFC had built an ecosystem of 23,000 professionals working in 2,100 companies with an asset management business of nearly \$500 billion. LendIt Fintech, "A Roadmap for Fintech Firms Entering Fast-Growing Emerging Markets" (PDF file), downloaded from LendIt Fintech website, https://www.lendit.com/press/white-papers, accessed September 23, 2019.

^g The DFSA regulated financial and ancillary services and was responsible for supervising and enforcing anti-money laundering and counter-terrorist financing requirements applicable in the DIFC. Dubai Financial Services Authority, "About Us," https://www.dfsa.ae/en/About-Us, accessed September 2019.

and financial hub.⁸ It was home to three million people, 85% of whom were expats from over 110 countries.^{9,10} In 2009, the DIFC hosted more than 750 companies—over 450 were commercial, investment, development, foreign, and domestic banks,¹¹ and 80% of these were Fortune 500 companies.¹²

In 2009, the global economic slowdown and slumping oil prices impacted Dubai's economy. Many companies struggled to meet their financial obligations. Aiming to calm investors, the government responded with a series of monetary and fiscal stimuli, consolidated the banking sector through mergers, and issued bonds to bail out^h state-owned holding companies that were defaulting on their loans.¹³

The Government's National Initiatives

The rapidly changing world requires us to accelerate our pace of development, for history recognizes not our plans but our achievements.¹⁴

 H. H. Sheikh Mohammed Bin Rashid Al Maktoum,ⁱ vice president and prime minister of the UAE, and ruler of Dubai

In 2010, H. H. Sheikh Mohammed bin Rashid Al Maktoum announced the UAE National Vision, which led to the UAE Vision 2021, a roadmap for shifting the country to a diversified knowledge-based economy. This was followed in 2013 by the Smart Government Initiative, designed to help the UAE adapt to the era of artificial intelligence (AI), the Internet of Things, and automation. A committee was formed to oversee the transition to smarter government services, smarter people, and smarter technologies. To

By 2014, following a liquidity injection, debt restructuring, and tighter controls, the UAE economy was exhibiting healthy growth. ¹⁷ (See Exhibit 3 for economic and demographic indicators.) The financial sector was looking more stable. Meanwhile, globally, having grown three-fold since 2008, fintech investments had reached \$3 billion, ¹⁸ and were threatening the financial sector. The Middle East and North Africa region presented an untapped opportunity for entrepreneurs looking to transform the future of finance. It had a population of over 350 million, a GDP of \$2.5 trillion, a considerable youth demographic, ¹⁹ and a sizeable population of expats interested in using technology for remittances in the region. ²⁰ (See Exhibit 3.) Mobile penetration in the region hovered around 80–90% and was forecasted to hit 100% by 2020, ²¹ but the unbanked population was the highest in the world (86%). The financial ecosystem in Dubai did not include fintech nor was there any systemic incentive for innovation that would make financial systems more efficient and improve the customer

h The bailout was provided by the National Bank of Abu Dhabi and the UAE's Central Bank. Simon Constable, "Multibillion-dollar Debt Crisis Looms For Dubai," Forbes, February 26, 2019, https://www.forbes.com/sites/simonconstable/2019/02/26/multi-billion-dollar-debt-crisis-looms-for-dubai/#4f1736a937ab, accessed September 2019.

ⁱ Since 2006, the constitutional ruler of Dubai was Sheikh Mohammed bin Rashid Al Maktoum. In 2009, he continued to serve as the UAE vice president as well as prime minister.

^j The Initiative characterized the smart environment by the following: a government transition to smart devices as the primary access channel, increased focused on predictive and pervasive smart services, advanced use of Secure Identity across government entities, and an infrastructure that was integrated at the national level. Telecommunications Regulatory Authority, "The National Plan for UAE Smart Government Goals" (PDF file), http://www.tra.gov.ae/assets/z6fD1H6M.pdf.aspx, accessed September 17, 2019

experience. ²² Since 2010, the region had managed to attract only 1% of the \$50 billion in investments in the global fintech sector. ²³

The government's initiatives proved to be effective, and in 2014, Dubai ranked 23rd in the global cities ranking, which provided a "top-down macroeconomic measure of innovation level in cities based on city-level macroeconomic parameters." ²⁴ In order to maintain its competitive edge, the UAE announced a national innovation strategy "to embed the culture of innovation amongst individuals, companies, and governments to make the UAE one of the most innovative nations in the world." ²⁵ In view of these initiatives and national goals, the DIFC was tasked with aligning the financial sector with Vision 2021 and the new innovation strategy. To advance on these goals, the DIFC prioritized helping financial institutions engage with technology and ensuring that startups in Dubai's finance sector remained relevant to the region's evolving customer and market needs. Market reports indicated that Dubai already had the key elements necessary for a fintech ecosystem, the business environment/access to markets, government/regulatory support, access to capital, and financial expertise. ²⁶ Now the DIFC needed to determine the most viable framework that would bring together all stakeholders to foster technology innovation in finance and attract fintech companies to the region. The DIFC set out to recruit someone to bring this vision to life.

Getting Raja Al Mazrouei on Board

In 2016, Raja Al Mazrouei was the senior vice president of marketing and corporate communications at the DIFC. She had started her career in IT in the finance sector, which had led her to the DIFC in 2010. In 2014, she was promoted and made responsible for overseeing public relations, institutional partnerships, branding, and digital marketing functions on a regional and global scale. (See **Exhibit 4** for a brief bio.) She had no experience in fintech, but her positions allowed her develop an intimate knowledge of the workings of the DIFC and a familiarity with the finance sector players in Dubai. Recalling the day she was asked to lead the fintech efforts, Al Mazrouei said, "I was surprised. Fintech was a different league. I found the national targets to be ambitious, and very exciting, so I decided to venture out of my comfort zone."

To help the DIFC fulfill the National Agenda, Al Mazrouei's first priority was to source fintech ideas in the UAE and to help founders get their ideas off the ground so that they could expand to international markets. The second was to identify fintech innovations not yet present in the Middle East and bring them to the UAE. Both tasks were highly challenging, particularly for someone with no prior track record in fintech, and Al Mazrouei had less than a year to make things happen. Prior to officially taking the role, in her existing capacity at the DIFC, Al Mazrouei had started researching global fintech ventures and examined different models from around the world that promoted fintech startups. She also travelled for months, familiarizing herself with the global ecosystem. She said, "I met with startups, incubators, accelerators, and financial institutions around the world . . . I felt that an accelerator platform alone would not be sufficient to get us to our goals in Dubai. I believed that, in our region, a holistic approach would be the best way to attract startups and support them from the inception of the idea all the way to product development and market entry."

It was after Al Mazrouei reported her findings at the end of 2016 and presented suggestions to the DIFC executive committee that she was formally appointed. In January 2017, she was ready to get to work setting up and operating a fintech accelerator for regional and international startups. For support, she contracted Accenture, a multinational professional services company that had experience running its own accelerator programs in London, New York, and Hong Kong.²⁷

Establishing the Hive

Setting Up the Framework

Soon after Al Mazrouei was appointed, the DIFC accelerator project, named the "FinTech Hive at the DIFC," became official. As executive vice president of the Hive, she settled into an office in the DIFC and recruited a core team to get the initiative off the ground. Working with Accenture, the team focused on pinning down the Hive's exact framework and agreed on the following: the Hive would run accelerator programs to help fintechs, insurtechs, regtechs,^k and Islamic fintech startups create solutions for the Middle East, Africa, and South Asia's largest financial industry and insurance partners.²⁸ The Hive would collaborate with senior executives of leading banks and insurance companies to identify the needs of the financial sector and then match these with solutions developed by startups. Accordingly, every year, the Hive would invite startups to compete for a 12-week accelerator program that offered them the opportunity to develop, test, and modify their innovations while being mentored by financial institutions.²⁹ (See **Exhibit 5** for the Hive's offering.)

Getting Financial Institutions on Board

Looking at global examples, Al Mazrouei knew the Hive could not progress without the buy-in of financial institutions. She said, "The accelerator will bring the actors together and raise awareness about fintech, and we need the financial institutions to educate the startups about the drivers and the challenges of the financial services sector in our region." A report by Accenture supported this argument: "The [banking] sector is becoming more competitive than ever, with tighter margins and cost cutting on most banks' radars . . . Costs can be cut and margins tightened only so far. A better solution is to increase the number of revenue pools by partnering with other players. [This] not only makes the process easier, it can also form part of the ongoing program of digitization that the banks are undertaking." ³⁰

Al Mazrouei immediately reached out to the financial institutions at the DIFC. She recounted, "I managed to get 22 financial institutions to sit together around the same table and engage in a conversation about the challenges they were facing or were predicting for our region in the financial sector." Fintech and technology innovation were not at the top of the banks' agenda, and there were differences of opinion about the imminence of the threat. Nevertheless, key players, such as HSBC, were positive. Ghinwa Baradhi, chief information officer at HSBC MENAT, recalled the roundtable meeting: "To stay on the cusp of change, HSBC actively works with innovative fintechs to test and develop PoCs [proof of concept]^m and new technologies for our customers. We have around 70 different engagements across the world ranging from PoC to mentoring and coaching. We take this strategy and direction very seriously and we're committed and excited to be part of the Hive." Talha Khan, head of innovation at the Abu Dhabi Islamic Bank recalled, "We try to find new solutions proactively and explore new opportunities to develop our business. On a reactive basis, we look at the existing problems in the business and then try to source solutions through fintech partners. The Hive

k Regtech referred to the management of regulatory processes in the financial industry through technology. The main functions of regtech included regulatory monitoring, reporting, and compliance. Jake Frankenfield, "Regtech," Investopedia, April 27, 2019, https://www.investopedia.com/terms/r/regtech.asp, accessed September 2019.

¹ MENAT referred to the Middle East, North Africa and Turkey.

^m Proof of concept referred to evidence from a pilot project that demonstrated that the business proposal was feasible.

offered us a natural link to the fintech ecosystem to do this." By March 2017, 11 of the 22 financial institutions had signed up as Hive partners. (See **Exhibit 6** for the Hive's financial partners.)

Getting the Regulator on Board

Talking to financial institutions, Al Mazrouei realized that incorporating the regulator into the Hive's framework—and the accelerator program in particular—was essential if the startups were to get their product to market. She said:

The kind of technologies we wanted to attract and incubate at the Hive were not defined under the current regulations. We decided to offer the regulator a front row seat in the Hive to be in direct contact with the startups. This would not only help the regulator understand the kind of initiatives the different startups were building, but it would also help it understand what regulatory infrastructure would be needed and how that could be done in a safe and secure way.

Peter Smith, managing director of policy and strategy at the DFSA, said, "We're involved in the selection process; we're sitting in and providing comments to the selection panel from a regulatory perspective. We don't get a vote, nor should we have a vote; I think that would be inappropriate. When people have questions about the possible regulatory status of an Hive applicant, we provide our view and offer advice. "

With the firm backing of financial institutions and with the regulator on board, Al Mazrouei was getting ready to roll out the first accelerator program. She said, "The main objective in the beginning was just to run the accelerator program to see what else we needed to do to support the fintech startups. How can we convince the banks to work with these technologies? What are the issues that the startups face when they deal with banks? What are the regulatory requirements for such technologies, and so forth?" Al Mazrouei spent the next few months travelling widely, both abroad and within the region, to promote the Hive, explain its objective and the offerings, and create a hype around the program.

Together with Accenture, the team crystalized the eligibility criteria for application, which stipulated that companies that apply must have a minimally viable product and be able to demonstrate an impact on the areas they were targeting.³¹ (See **Exhibit 7** for eligibility criteria.) In April 2017, the Hive was ready to accept applications for its first accelerator program.

The First Accelerator Program

In just a few days, the Hive had received 110 applications from all over the world, including from entrepreneurs in the US, Europe, India, Singapore, Jordan, and Lebanon. To narrow down the candidate pool, Al Mazrouei invited each of the 11 partner banks to designate a representative to sit on an interview panel. Each financial institution had a vote in the selection process, given that the selected entrepreneurs would end up being mentored by these institutions based on the latter's interests. The pool was reduced to 25 as a result of the interviews.

Then in July, the Hive invited 11 of those 25 startups to Dubai for a three-month program. The Hive hosted a welcome event to which Al Mazrouei invited financial institutions, law firms, compliance institutions, and tech companies in order to create an awareness around the accelerator program and to encourage the stakeholders to interact with startups. The startups pitched their ideas in front of this audience. Next, the Hive conducted a "speed dating" exercise, where each institution set aside a half

day for each of the 11 startups to pitch their product and explain their business model to a panel of that institution's management and heads of digital transformation, IT, and other functions.

After two weeks, when all 11 institutions had hosted all 11 startups, the Hive compiled feedback from the banks, where they indicated the startups they were keen to work with. Al Mazrouei said, "The whole structure was aimed to facilitate the startups' actually finding a solution to the respective bank's pain points. Based on the feedback, we matched the banks with the startups to have them engage in a close mentor-mentee relationship." The mentoring period allowed the startups to refine their product propositions, and to test and develop their technology in close collaboration with the banks, with the ultimate aim of achieving PoC. It also allowed the banks to fully understand the proposed technology and gave them the opportunity to reconcile it with the regulatory and compliance requirements. They were also able determine possibilities for integrating it into their own system or figure out some sort of collaboration.

One of the startups to reach PoC was Sarwa, which focused on robo-advisory. Its founder, Mark Chahwan commented, "We applied to the program because it brought together all the stakeholders—the banks, the investors, and the regulator—we would want connections to. We didn't know if we would get a PoC, but we were sure we'd learn a lot." He continued, "The three-month period gave us a sense of urgency, and we really pushed ourselves to reach PoC. Our access to the financial institutions and mentors functioned like a crash course for us to quickly understand their challenges and learn to speak their language. We also benefited a lot from the public relations aspect of being in the program, as we got a lot of media coverage."

As the program progressed, Al Mazrouei realized that a closer relationship with the regulator was needed to help guide the startups through the regulatory process. In May 2017, the DFSA devised a solution: it launched a sandbox olicense called an innovation testing license, which allowed the startups to test their technology in a regulated environment. Smith elaborated, "The innovation testing license gives the regulator access to the startup and the technology so that we can understand, inside out, the technology to be regulated. First we agree with the startup on a limited number of customers and transactions with a capped transaction amount to experiment with and then observe the full life cycle of the company's offering." Smith summarized the purpose of the license: "One objective is for the startup itself to test their idea with real clients and see whether it works and gains traction. For the regulator, the aim is to see whether we can actually properly supervise the technology and regulate it. And finally, we're looking to see if the founders and their team are suitable people to give a proper license to. Once the regulator was comfortable with the testing progress, it could grant the company a full license to operate in the DIFC as an independent company." Sarwa was one of the first Hive companies to enter the sandbox process. Chahwan said, "We [the regulator and Sarwa] learned from each other. If they suggested something we didn't like, we would always ask why -"Why don't you like it? What are you trying to solve?" Then we understood what they were looking for and began to build out solutions that addressed those points."

In November 2017, after an intense learning and development period, all 11 startups were able to reach the PoC stage, and Sarwa obtained an innovation testing license. On November 12, the FinTech Hive's first accelerator program concluded with an Investor Day, where the startups presented their concepts. Al Mazrouei explained, "For the Investor Day, we invited VCs, funds, and key individuals

ⁿ Robo-advisory was a digital form of financial advisory service that relied on algorithms to offer advice, meaning there is little human intervention. "Robo-advisor definition," IG Group, 2019, https://www.ig.com/uk/investments/support/glossary-investment-terms/robo-advisor-definition#information-banner-dismiss, accessed September 2019.

^o Sandbox referred to a virtual space in which a new business idea/model could be tested.

from the financial services industry to demonstrate how far the incubated startups had come after collaborating with financial authorities and being exposed to the regulatory and legal landscape." After the pitches, the Hive hosted a networking session to further expose the startups to VCs, angel investors, and other funds for deeper conversations on the startups' fundraising needs. Al Mazrouei commented, "Our ultimate objective was to help these startups establish a presence in the DIFC. To facilitate this, we decided to provide a coworking space." The Investor Day marked the "graduation" of the startups from the Hive, an event where six proofs of concept and six licenses were registered.

Challenges

Lack of Awareness

The first program was a success, but it had not been without its challenges, and Al Mazrouei knew she needed to tackle these if the future programs were going to succeed. She said, "In the beginning, the biggest challenge was awareness. Nobody knew what we were talking about when we uttered the word 'fintech;' the banks were, like, 'so what do you want us to do?'" After numerous meetings and presentations, Al Mazrouei had managed to get 11 financial institutions on board, yet there was still a long road ahead to reach the whole sector. She said, "Some financial institutions did not perceive the imminent threat of disruption—they figured they still had time. I got together with them once, twice, three, four times to share examples of some technologies that had disrupted the industry globally and explain that these were coming to the UAE and the region as a whole." Al Mazrouei was determined to keep a close relationship with the banks to change this sentiment and eventually make them strong partners in the fintech ecosystem.

Regulatory Framework

Prior to the Hive, the regulatory framework in the UAE was rather conventional and not prepared to embrace fintech. Al Mazrouei said, "Regulators come from a strong compliance and legal background; they weren't open to innovation or technology, that's not their field." Al Mazrouei's had worked very closely with the regulators to liberalize financial constraints and had managed to get them to launch the sandbox, which was a big step toward opening up the sector to new technologies. Also, Dubai had different regulatory bodies overseeing different aspects of fintech, which meant that everything needed to be aligned and coordinated with the various relevant authorities before a final decision could be made.

Scarcity of Investors

In 2017, the government launched a regulatory framework for the operation of VC funds in line with its National Agenda and raised the limits on institutional and individual investments.³² Yet Al Mazrouei knew that a lot still needed to be done on the investor front to create a funding stream to keep the startups in the region. She said, "The investment mentality here is very traditional. People look for guaranteed returns; they invest in gold and real estate. Getting them to invest in startups requires a big cultural change, and we realized that without that cultural change, just making it attractive for startups to set up shop in the UAE would not lead anywhere. I am sure success stories will help change this, but so far, finding angel investors or institutions or VCs to back investors has been a challenge."

Shane Shin, the founding managing partner of Shorooq Partners, an early-stage fund focused on seed^p and Series A^q investments, echoed this sentiment: "[In the region], we have, I would say, a satisfactory investor appetite for Series A, because that's where startups have decent traction, and it is much less risky than seed investment. And many investors [in the region] can afford a \$1 million plus check size, because we have access to capital here, which is the unique dynamic." Shin found the Hive to be an ideal partner, and Sharooq had already invested in two Hive graduates. He continued, "We have quite a few families who might be relatively unsophisticated in the VC world but who are happy to arrive at a \$50,000–\$100,000 check size as angel investors. There still is a need for more investors in the seed to pre-seed stage but the main a funding gap that we see is in the later stages, Series B and C. We don't have investors who will agree to a check size of \$10–\$30 million, like we see in the U.S. or in China. We also lack sophisticated angels."

Growing the Hive

A \$100-Million Fintech Fund

By 2017, the number of fintech companies in the Middle East and Africa had reached 839, almost nine times the 2010 figure.³³ (See **Exhibit 8** for the growth trend of fintech companies.) Analysts predicted that, driven by demand for better customer experience, the financial technology sector in the Middle East and Africa, though still in its infancy, was set to capture 8% of the region's financial services revenue by 2022.³⁴

To Al Mazrouei, this signaled an increasing need for financing for fintech startups. She said, "As the startups got commercial licenses and coworking spaces, we saw that the next step for them was fundraising. Startups tell me it's very difficult to raise money here because the funds and VCs do not understand the technology or what the startups are trying to achieve. And the minute they give money, they start controlling the business." Chahwan commented, "I think there are absolutely not enough people who have invested in fintech. Whenever they're evaluating your business, they look at metrics that aren't as applicable because they compare you with other industries. So, when we're looking for financing, we end up spending a lot of time educating investors on the unit economics as well as the regulation."

Al Mazrouei knew how crucial funding was to the sustainability of the ecosystem she was trying to create. In 2017, the Hive created a partnership with fourteen local VCs and funds from the GCC^r region to facilitate conversations with startups, but this was not enough. To cement its commitment to the development of the fintech industry in the region, in November 2017, the DIFC launched a \$100-million fintech-dedicated fund to invest in fintech globally. Commenting on the fund, the DIFC governor, Essa Kazim, said, "We really want to position the DIFC at the forefront of the changes that are going to happen in the financial sector. This [fintech] is something that we really want to support in the region. You can see that it's underserviced today and that inclusion is minimal." The fund was to be deployed

P Seed funding referred to the first official money that a business venture raised. Nathan Reiff, "Series A, B, C Funding: How It Works," Investopedia, June 25, 2019, https://www.investopedia.com/articles/personal-finance/102015/series-b-c-funding-what-it-all-means-and-how-it-works.asp, accessed September 2019.

^q Series A referred to the first round of funding for a business through investment, including private equity investors and VCs. James Chen, "Series A Financing," Investopedia, May 14, 2019, https://www.investopedia.com/terms/s/seriesa.asp, accessed September 2019.

^r GCC refers to the Gulf Cooperation Council, which was established in 1981. The Council is a political and economic alliance of Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman.

over time, starting from the end of 2018. Investment decisions would be made purely on a commercial basis, without a preset minimum or maximum. The DIFC would co-invest with VCs, and the fund would seek investment from other government entities in Dubai.³⁶

The 2018 Accelerator Program

In March 2018, before the Hive began accepting applications for the 2018 accelerator program, Al Mazrouei's efforts were bearing fruit, and ten more financial institutions joined the Hive as partners. Al Mazrouei said, "This is really important. It shows that financial institutions are accepting the idea; they are opening their minds and their resources to the startups and are understanding what they offer." Interest in the second accelerator program was also on the rise: they had 300 applications, triple what they had for the first edition of the program; for the 2018 edition, the Hive accepted 22 startups, twice the number they had accepted the previous year. (See Exhibit 1.)

At the end of the second three-month accelerator program in July, 20 PoCs were achieved, and four were converted into products and introduced to the end customer. Bankbuddy, a next-gen fintech company that leveraged AI to help financial institutions improve their customer interactions, was among the companies that achieved a PoC. Bankbuddy's co-founder, Aditya Bhagat, said, "We had been operational for almost two years before applying to the program. We wanted to get customer and concept validation with banks, and we got that opportunity through the Hive. We reached a full PoC, and even got our first client while we were still in the program! It was a purely market-led, ground-up program that brought us together with our end users, the banks." Fellow program participant Walid Daniel Dib, co-founder of Addenda, which used a blockchain platform to reconcile insurance claims, agreed: "We were mentored by insurance companies, our future clients. Having direct access to these companies and their input helped us a lot; we saved two years on our process."

Competition

Since the inception of the Hive, a number of accelerator and incubator programs with similar premises launched in Dubai. The banks in Dubai were realizing the challenges and opportunities of the fintech revolution and were independently initiating digital banking initiatives. ³⁷ Al Mazrouei said, "Apart from the Hive, there are two main fintech bases in the region. One is the Abu Dhabi Global Market, whose level of activity is roughly about half of what we have here in terms of volume. The other is the Bahrain Fintech Bay initiative, whose activities are similar to ours." (See **Exhibit 9** for an overview of the competitive environment.) In the first half of the year, Dubai and Abu Dhabi had secured 32% of startup deals in the MENA region and 59% of the investment. ³⁸ In 2018 and 2019, Al Mazrouei signed partnerships with accelerators in China, India, the U.K., the U.S. and several countries in Africa on behalf of the Hive, and by mid 2019, the Hive had 16 global partners, far more than its peers. ^{5,39} Al Mazrouei said, "These collaborations will benefit startups, entrepreneurs and large established entities by enhancing access to investment, unlocking business opportunities and engaging new audiences and innovative products and ideas." ⁴⁰

^s FinTech Hive signed agreements with global fintech accelerators: Accenture's global FinTech Innovation Labs in New York, London and Hong Kong; the iE5 in London; SuperCharger in Hong Kong and Kuala Lumpur; LATTICE80 in London and Singapore; DICE FinTech Ace in Mumbai; Finance Innovation and Le Swave in Paris; B-Hive in Brussels; Holland FinTech; and Bahrain Fintech Bay.

The Hive in 2019

In February 2019, the Hive began accepting applications for its 2019 accelerator program. Interest in the program was stronger than ever; there were 425 applicants. News from graduates was making headlines: Sarwa had 3,000 clients and was experiencing a 30% revenue growth month-on-month; on top of the \$1.3 million it had raised, it was planning to raise another \$2–4 million in Series A in the second half of the year. Bankbuddy had banking customers signed up in eight countries. Inspired by the overwhelming interest it had generated, the company relocated its team from India to Dubai. Others, if they had been unable to secure financing, left the sandbox. Al Mazrouei commented, "In the face of financing challenges to becoming a stand-alone company, some startups pulled out of the sandbox and decided to become a tech company that would license their technology to banks for the banks to use it under their own licenses."

By mid-2019, the Hive had signed MOUs with two of the biggest VCs in the region, Middle East Venture Partners (MEVP) and Wamda Capital, to co-invest and co-manage opportunities through its \$100-million fund. The Hive had earmarked \$5 million to co-invest with each, and the VCs would oversee the investments. Al Mazrouei explained, Investment is not really our thing, but we wanted to support the market, so we partnered up with MEVP and Wamda Capital, who know what they're doing, on the condition that they also commit to the amount that we put in as investment. In August 2019, Al Mazrouei was once again proud as Emirates NDB (ENDB), one of the largest banking groups in the Middle East in terms of asset size, cited its collaboration with the FinTech Hive as one of the factors that contributed to its rating increase by Moody's. Mik Kabeya at Moddy's was quoted saying, ENBD's collaboration with the fintech start-ups, which all used ENBD's application programming interface (API) sandbox, is credit positive because it will help the bank develop new digital products and services to meet evolving customer expectations, supporting the bank's profitability. The same very supporting the bank's profitability.

What's Next?

Al Mazrouei's mandate had been to create a hub where fintech startups could come and establish their businesses in the DIFC. By late summer 2019, in just a little over two years, she had succeeded by all standards: she had created a brand name for the Hive, she had put Dubai on the map for fintech, she had managed to attract startups from all over the world, and the first Hive graduates were already in the market raising Series A. Yet her work was not even close to being done. Attracting the startups to the region was one thing, but now she needed to find a way to keep them there, solidify the ecosystem, and make sure that the initial goal of benefiting financial institutions was fulfilled.

She turned to her notes from her meeting with Addenda: after struggling to raise financing from VCs, the company had continued its operations thanks to the support of the angel investors she had introduced them to and was now in late-stage talks with a bank and the Hive's fund. The founders had worked hard to get this far. Would they be able to get institutional investors on board this time around? She knew this would set a great example and encourage other startups to follow suit. Was the \$100-million fund going to suffice to sustain fintech startups in the region? How could Al Mazrouei ensure the sustainability of her efforts—specifically, without a shift in mindset in the general population about angel investing and the formation of VCs, would the Hive's efforts have been in vain? What more could she do to attract founders and startups that would stay in the region and help strengthen the ecosystem?

Exhibit 1 2017–2018 Startups Accelerated by Fintech Hive

Year	Name	Area	Origin
2017	Maliyya	FinTech	Azerbaijan
2017	Theme Chain	FinTech	India
2017	Labiba	Fintech	Jordan
2017	Welnvest	FinTech	Singapore
2017	Middleware	FinTech	USA
2017	Semantify	Fintech	USA
2017	Delio	FinTech	UK
2017	Bridg	FinTech	UAE
2017	Sarwa	Fintech	UAE
2017	Norbloc	RegTech	Sweden
2017	Starling Trust	RegTech	USA
2018	Verify Payments	FinTech	Bahrain
2018	PaySky	FinTech	Egypt
2018	bankbuddy.ai	FinTech	India
2018	Jaib	FinTech	Jordan
2018	Spare	FinTech	Kuwait
2018	Amplified Payment System Ltd	FinTech	Nigeria
2018	Haseed	FinTech	Saudi Arabia
2018	Jibrel	FinTech	Switzerland
2018	BetterTradeOff Fintech Solutions Ltd	FinTech	UAE
2018	Game Change Solutions	FinTech	UAE
2018	iWealth	FinTech	UAE
2018	Money Mall	FinTech	UAE
2018	bondsmart	FinTech	UK
2018	Limitless	FinTech	UK
2018	Blinking.id	RegTech	Serbia
2018	Amani Technologies Ltd	RegTech	UAE
2018	ebooc	RegTech	UAE
2018	Verismart	RegTech	USA
2018	InsureVite	InsurTech	Singapore
2018	Addenda	InsurTech	UAE
2018	Turnkey IS Technologies LTD	InsurTech	UAE
2018	Virtual i Technologies LLC	InsurTech	UAE

Source: Compiled from "FinTech Hive at DIFC Commences Inaugural Accelerator Programme," DIFC Fintech Hive, August 21, 2017, https://fintechhive.difc.ae/events-news/FinTech-Hive-at-DIFC-Commences-Inaugural-Accelerator-Programme, "Fintech Hive Welcomes 22 Innovative Startups for its 2018 Accelerator Programme," DIFC Fintech Hive, September 4, 2018, https://fintechhive.difc.ae/events-news/Fintech-Hive-Welcomes-22-Innovative-Startups-for-its-2018-Accelerator-Programme, accessed September 2019.

TURKEY IRAQ EGYPT SAUDI ARABIA SUDAN ETHIOPIA IRAN Mīnā' Şaqr BAHRAIN Penin Persian Guli Khawr Fakkān QATAR MAN Al Fujayrah Mīnā' Jabal 'A Gulf of Hatta Oman Mīnā' Zāyid ABU DHABI Al Khaznah Al 'Ayn' Ar Ruways Ţarīf SAUDI OMAN ARABIA Quţūf

Exhibit 2 Maps of the Middle East and the United Arab Emirates

Source: Courtesy of the University of Texas Libraries, The University of Texas at Austin. http://www.lib.utexas.edu/maps/, accessed September 2019.

Exhibit 3 UAE Economic and Demographic Indicators (2009–18)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP (current US\$, billions)	253.5	289.8	350.7	374.6	390.1	403.1	358.1	357.0	382.6	414.2
GDP per capita, PPP (current international \$)	56,975.5	54,230.2	56,574.3	58,961.2	62,641.8	66,516.9	70,261.5	72,386.1	73,355.9	74,942.7
Population (millions)	7.9	8.5	8.9	9.1	9.2	9.2	9.3	9.4	9.5	9.6
Population growth rate (annual, %)	11.0	7.7	4.5	2.2	0.6	0.2	0.5	1.1	1.3	1.5
Mobile Cellular Subscriptions (per 100 people)	139.2	132.1	135.2	154.8	178.4	185.4	196.0	214.7	210.9	N/A
Internet Penetration (% of the population)	64.0	68.0	78.0	85.0	88.0	90.4	90.5	90.6	94.8	N/A

Source: Compiled by the casewriters based on information from World DataBank, The World Bank Group, accessed September 2019.

Exhibit 4 Raja Al Mazrouei Bio



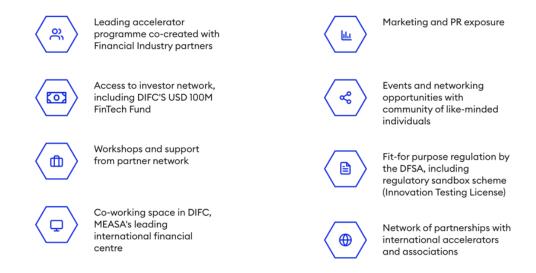
Raja Al Mazrouei, Executive Vice President – FinTech Hive As executive vice president of FinTech Hive at DIFC, Raja Al Mazrouei oversees the region's first fintech accelerator, which brings together financial institutions, government entities, technology partners and entrepreneurs to develop technologies that benefit the financial industry. Ms. Al Mazrouei plays an integral role in building awareness, increasing outreach and facilitating partnerships in fintech markets, such as the U.K., the U.S. , Europe , India, Asia and Africa, with the aim of positioning the DIFC as the region's leading innovation destination for fintech.

Prior to her current role, Ms. Al Mazrouei was senior vice president of marketing and corporate communications at DIFC, where she oversaw the public relations, institutional partnerships, branding and digital marketing functions. Previously, she held the position of commissioner of data protection at DIFC, in addition to key roles that included head of operations and head of information technology. Earlier in her career, she served as head of information technology at the National Bonds Corporation, director of IT relationship management at Dubai Holding. and systems development manager at the Higher Colleges of Technology in the UAE.

Ms. Al Mazrouei is a graduate of the Harvard Business School Executive Education program; she also holds an MBA in global leadership and management from the United Arab Emirates University and a bachelor's degree in business information technology from the Higher Colleges of Technology. She is also a member of the Harvard Business School Middle East and North Africa (MENA) Advisory Board based in Boston and is vice president of the Harvard Business School Club for the GCC.

Source: Created by casewriters from interviews.

Exhibit 5 Offerings of Fintech Hive in DIFC's Accelerator Program



Source: DIFC Fintech Hive, "2017 Fintech Accelerator Programme," https://fintechhive.difc.ae/programmes/2017-FinTech-Accelerator-Programme, accessed September 2019.

Exhibit 6 Fintech Hive at DIFC's Financial Partners (2019)



Source: DIFC Fintech Hive, "Partners," https://fintechhive.difc.ae/partners, accessed September 2019.

Exhibit 7 Eligibility Criteria for Fintech Hive at DIFC's Accelerator Program



Minimum viable product to demonstrate and provide access to partners



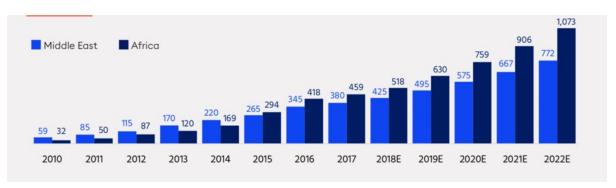
One to two company representatives with technology decisionmaking capabilities (e.g. founder, CEO, CTO) throughout the programme



Require mentorship of senior banking and industry executives to either refine product or engage in Proof of Concept

Source: DIFC Fintech Hive, "2017 Fintech Accelerator Programme," https://fintechhive.difc.ae/programmes/2017-FinTech-Accelerator-Programme, accessed September 2019.

Exhibit 8 Growth Trend of Fintech Companies in MENA



Source: LendIt Fintech, "A Roadmap for Fintech Firms Entering Fast-Growing Emerging Markets" (PDF file), downloaded from LendIt Fintech website, https://www.lendit.com/press/white-papers, accessed September 23, 2019.

Exhibit 9 Overview of the Competitive Environment

	Fintech Hive at DIFC	Bahrain Fintech Bay	Abu Dhabi Global Market
Founded in (year)	2017	2018	2016
Number of Startups Accelerated (2017-18)	>40	>40	26
Collaborations w/ Global Accelerators	Yes	Yes	Yes
Integrated w/ Regulatory Sandbox	Yes	Yes	Yes
Linked w/ an Exclusive Fintech Fund	Yes	No	No

Compiled by casewriter from Abu Dhabi Global Market, "Fintech at ADGM," https://fintech.adgm.com/fintech-at-Source: accessed September Abu Dhabi Global Market, "Global Financial Innovation Network (GFIN)," https://fintech.adgm.com/globalfinancial-innovation-network/, Abu Dhabi Global Market, "RegLab," https://www.adgm.com/settingup/reglab/overview, Bahrain Fintech Bay, "Partners," https://www.bahrainfintechbay.com/partner, "Bahrain Newsletter," Bay July 2019 Monthly Bahrain Fintech Bay, https://mailchi.mp/1f01cf1f6849/bahrain-fintech-bay-july-2019-newsletter?e=642c8b2674, "Central Bank of Bahrain announces new fintech regulatory sandbox," Econotimes, June 21, 2017, http://www.econotimes.com/Central-Bank-of-Bahrain-announces-new-fintech-regulatory-sandbox-767031, DIFC Fintech Hive, "2019 FinTech Accelerator Programme," https://fintechhive.difc.ae/programmes/2019-fintech-

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