Impact Evaluation of the Mohammed Bin Rashid Innovation Fund (MBRIF)

UNPSA Submission Report

November 30, 2018

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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AED</td>
<td>United Arab Emirates dirham (currency)</td>
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<td>EDB</td>
<td>Emirates Development Bank</td>
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<td>GII</td>
<td>Global Innovation Index</td>
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<td>ICT</td>
<td>Innovation and communication technology</td>
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<td>MBRIF</td>
<td>Mohammed Bin Rashid Innovation Fund</td>
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<td>MoF</td>
<td>Ministry of Finance</td>
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<td>NIS</td>
<td>National Innovation Strategy</td>
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<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>SME</td>
<td>Small and medium enterprise</td>
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<td>UAE</td>
<td>United Arab Emirates</td>
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<td>UN PSA</td>
<td>United Nations Public Service Awards</td>
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<td>USD</td>
<td>US-Dollar (currency)</td>
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1. Introduction

1.1. Background and objectives of the Mohammed Bin Rashid Innovation Fund

The Mohammed Bin Rashid Innovation Fund (MBRIF) is a strategic project of the Ministry of Finance (MoF) of the United Arab Emirates (UAE) and entered the market late 2016 with Emirates Development Bank (EDB) as its host and operator.

According to the GII (Global Innovation Index) report in 2015, a clear indication of a gap in “access to funding” by innovators in the UAE was alarming enough to decide that government intervention was required and that the ministry needed to improve the funding situation for innovative businesses. As per the report, the readiness and the capacity of the regional innovation ecosystem in terms of enablers and infrastructure, in the UAE scored lowest on market and business sophistication, out of which the investment sub-indicator was the lowest.

Although more financial options are available in the market, affordable financing solutions for innovators are missing. Commercial banks and other financiers in the region have shown rather conservative risk appetite and portfolio view on innovation funding. Financiers do not have enough incentives to issue affordable loans to local innovators since the commercial risks they are facing are too high. Due to these excessive risks, collateral required from the applying party is relatively high. Thus, a major challenge for innovators and start-up’s is to receive affordable funding from financiers allowing them to expand their businesses. This lack of adequate innovation financing creates a competitive disadvantage for UAE SMEs (small and medium enterprise) hindering economic growth, employment and overall prosperity.

Especially in the context of the continued effort of the UAE to diversify their economy, reduce their dependence on oil and increase the attractiveness of the private sector for the work-force, the creation of a thriving innovation and entrepreneurial eco-system is essential in ensuring the economic competitiveness of the country. The high relevance of innovation for the economic development was also recognized by the adoption of a National Innovation Strategy (NIS) in 2015, which defined the priorities to fostering innovation in the UAE.1

In light of these considerations, it was decided to fill the financing gap for innovators in the market by a government innovation promotional policy. In November 2015, the Mohammed Bin Rashid Innovation Fund (MBRIF) was announced with a size of AED 2 billion (USD 544.4 million) by the Ministry of Finance. After a year of designing the strategy, the operating model, funding policy, market sounding, pilot phase and definition of desired impacts, MBRIF became operational with the launch of its electronic application platform in November 2016.

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1 Prime Minister’s Office at the UAE Ministry of Cabinet Affairs (2015): UAE National Innovation Strategy
MBRIF acts on behalf of the UAE government and provides guarantees as collateral to financiers when financing innovation (see Figure 1). This increases (i) the potential for commercial loans to be issued into such innovative companies and projects and (ii) incentives respective financiers to issue these loans at lower interest rates compared to market standards, and (iii) reduce collateral required from the innovators. MBRIF is the first government initiative in the UAE on federal level to finance innovation through guarantee backing for commercial loans for innovation projects. The program is the first program allows applications from non-UAE-nationals and as such opens the UAE to be a platform and launchpad for innovation, attracting and localizing innovation into the country. Its’ focus with respect to the sectors of innovation is aligned with the innovation priority sectors of the NIS.

The cooperation model with the banking sector and the close alignment between government, private sector and other stakeholders as well as the hosting and operating model with the UAE Development Bank are further statements towards the aspiration to create impact, the pursuit of the National Innovation Strategy and, ultimately, the promotional role of the Fund. By mitigating financial risks and fostering business development, MBRIF intends to facilitate the go-to-market process of innovation activities and accelerating the growth of innovative businesses with solutions that create impact in the UAE and beyond.

*Figure 1: Guarantee Scheme of MBRIF*

Inspired by successful models in the most innovative countries globally, the structure of MBRIF has been adapted and localized to reflect the market circumstances in the UAE. Its product design and partnership model as well as the embeddedness into the federal public sector context allows innovators to focus on their products and services while benefitting from services outside funding, as well, with the soon to be launched sister program (Innovation Accelerator). Thereby, it stimulates the issuance of a loan and facilitates, the liquidity for such projects in the market and the impact the selected projects aim to achieve, so that the innovation activities aim at inclusive and sustainable growth.

In line with its mission to be the trusted partner in supporting innovators in their journey to expansion and through targeted financial risk mitigation and business development tools, MBRIF seeks to reach various objectives in the national economy:

- bridging the financing gap across innovation projects,
- commercially accelerating the UAE’s innovative products and services in regional and international markets,
- promoting the UAE’s reputation and footprint on the international innovation scene,
- improving the UAE’s economic competitiveness and
- expanding its national growth potential as well as
- stimulating public-private collaboration in innovation.

By bringing innovative solutions into the region MBRIF follows a demand driven, future oriented and inclusive approach to innovation and growth. It also bridges the geographic gap through promoting
digital transformation in public institutions (e.g. online platform to ease remote applications, virtual committee, end-to-end online process except final documentation) and delivering inclusive and equitable services. Thereby, stimulation of the issuance of loans and rise in innovation activities leads to economic progress of diversification and higher sustainable development. The sustainability is anchored in the mandate of MBRIF, i.e. its long term dedication and the open ended timeframe of its market presence, and the sustainable footprint of the projects delivered through the eligibility and selection criteria of MBRIF.

As innovation also becomes more important in the context of the United Nations’ ask to governments, business, civil society and general public to support the 17 Sustainable development goals (SDGs) for 2030, the role of innovation funding has been emphasized, as well. The Sustainable Development Agenda puts significant importance on inclusiveness and growth through innovation; therefore, MBRIF is strongly positioned being a facilitator of innovation and through innovation achieving SDG impact in a country that has progressed on the innovation trajectory substantially in the recent years.

The priority innovation sectors defined by the National Innovation Strategy and hence the sector focus of the MBRIF are also directly aligned with several SDG goals (see Figure 2). By focusing on innovations that address important challenges in the UAE itself (incl. water, energy, healthcare), the MBRIF is intended to achieve a significant regional development impact; the sustainability being anchored in the evergreen mandate of MBRIF.

Figure 2: Sustainable Development Goals & MBRIF (National Innovation Strategy)

As a consequence, since its inception, MBRIF has received 153 applications, two thirds of which have been assessed (due diligence process completed). In the first two years of its operation the fund is still in the ramp-up phase and has approved three projects with a total disbursed amount of AED 14,500,000 (ca. USD 4 million) and one pre-approved project.
The Ministry of Finance aspires to nominate MBRIF for the 2019 edition of the United Nations Public Service Awards (UN PSA), which is the most prestigious international recognition of excellence in public service. It rewards the creative achievements and contributions of public service institutions that lead to a more effective and responsive public administration in countries worldwide.

1.2. Impact Evaluation

1.2.1. Purpose and Scope of the Impact Evaluation

Two years after the program’s inception the following impact evaluations aims to review and evaluate the MBRIF activities to date. Based on the evaluation findings recommendations on the further improvement of the program are derived. The focus of the evaluation is to assess the effectiveness of the program in reaching the intended objectives. In this respect the evaluation faces the challenge that some of the objectives can only be partially addressed because of the expected long-term nature of some of the impacts (e.g. create visibility of the UAE in the international innovation scene). To overcome this, the evaluation will also assess the target orientation of the program setup, to infer whether these long-term objectives can be reached.

Overall, the evaluation intends to answer the following overarching questions:

i. To what extent does the MBRIF address relevant obstacles in the area of innovation promotion in the UAE?

ii. What is the program’s value-add compared to existing promotion?

iii. To what extent does the design of the program support the intended objectives?

iv. Does the program achieve the intended objective of closing the financing gap for innovative SME’s and commercially accelerate the products in regional and international markets?

v. Is the program expected to achieve the overarching long-run objectives of promoting innovation activities in the UAE and support the objectives defined by the NIS?

vi. Does the MBRIF align with the SDGs?

vii. How do the program results promote the achievement of the SDG’s?

1.2.2. Evaluation Logic - IIOOI Impact Logic

The status quo and needs of innovators in UAE as well as the intended goals of MBRIF described in the introduction provide the basis for the evaluation procedure. Based on this, a theoretical impact logic for MBRIF is developed that represents the intended target system of the fund.

The IIOOI (Input Implementation Output Outcome Impact) logic used distinguishes five levels of impact, which differ in terms of their temporal dimension and their degree of aggregation. Due to the short-term perspective of our evaluation and the fact that the program is still in the ramp-up phase, we only consider the first four dimensions, aggregating the medium- and long-run effects (Outcome and Impact) in one category (see Figure 3).

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2 The theoretical „theory of change“-model is commonly applied in evaluations to identify the intended program framework and identify data (indicators) that need to be collected.
In the following, we describe the potential cause-and-effect relationship at different impact levels and outline suitable indicators that are then used in the evaluation analysis.

- The provision of government-backed guarantees by MBRIF (input) supports local innovators in accessing affordable finance. By providing a guarantee as security for the loan, financiers are encouraged to issue a loan and to reduce the collateral required from the applicants. By that MBRIF intends to (i) stimulate financing to innovative companies in the seed/early stage and (ii) reduce costs of financing for these innovative companies. The adequacy of application and revision process is intended to ensure the support of suitable companies (implementation). To evaluate MBRIF we will analyze, among other things, the number of applicants (accepted, rejected, under review), the development of applications over time as well as the sectoral distribution of applicants. We will also identify the main reasons for rejection and the awareness of the program in the target group.

- As a result of MBRIF, the loan issuance for innovative start-ups and SMEs should be increased (output). To analyze, whether these short-run results are achieved, we analyze three successful applicants and their projects supported by MBRIF (characteristics of the innovation projects, focus of innovative project etc.). In addition, we will measure the incentive effects at banks (differences in collateral, interest rates).

- In the medium-to long-run the supported innovators are intended to start their companies or invest in relevant innovative technologies needed to ramp-up or increase company growth. By this it is intended that the revenue (volume of additional revenue) as well as the number of employees is increased (number of new employees, age of new employees). The additional employment and growth of SMEs may in turn lead to an improvement of the labor market situation in UAE as well as an overall improvement of the UAE’s economic competitiveness and expansion of its national growth potential. Furthermore, through the implementation of innovative technologies the companies contribute to overall goals (e.g. fostering green efficiency, reducing water scarcity or decreasing import dependencies through local production of goods (outcome and impact).
1.2.3. Evaluation Methodology

The evaluation of the MBRIF took place in November 2018 and employed a mixed methods design to ensure triangulation and mutual validation of the findings.

The methodological approach was tailored to answer the evaluation questions at hand, while taking into account all relevant available and collectable data sources. The outlined program logic and the identified target indicators were used as framework for the analysis. The evaluation process was developed in close cooperation with the MBRIF. In particular, the following data sources were used:

- **Structured document review**, e.g., of the program documents and strategic objectives of the MBRIF, as well as reports and publications of regional organizations addressing the economic status-quo of SME and their innovation efforts in the UAE.

- **Secondary data analysis**, e.g. of the application statistics of the MBRIF

- **Semi-structured interviews** with 2 of 3 successful applicants of the MBRIF as well as with the Ministry of Finance, the RAK Bank and the EDB - the host and operator of the fund.

The evaluation is faced with the limitation that the number of successful applicants for the fund was still very low at the time of the analysis. The challenge was addressed by conducting in-depth qualitative interviews with the applicants, rather than quantitative surveys. While the results based on the interviews provide valid and reliable insights, it should be kept in mind that quantitative impact estimates on a low number of respondents provide indicative results.
2. Impact evaluation results - Effectiveness of the MBRIF

2.1. Relevance and suitability of MBRIF

In investment climate surveys around the globe, the difficulty of obtaining financing is usually one of the top three constraints on doing business that are identified by SMEs – and, in several regions, access to finance is the single most important constraint. Also in the UAE the main obstacles faced by SMEs when aiming to innovate are related to lack of access to affordable finance. Innovating SMEs find it particularly difficult to present a robust business case to potential finance providers with acceptable levels of investment risk (some will be successful, some will fail). Less mature innovative enterprises and start-ups have little or no collateral to offer while raising external finance; assessing and monitoring such firms poses a challenge. At the same time giving equity at low valuations to early stage investors is not always perceived as the best choice. Smaller companies, especially technology-based ones, rarely obtain support by banks given the risk/benefit profiles. Therefore, these have difficulties to engage with these companies and offer financing incl. loans if and when the only collateral is IP/an idea. In the past years, UAE’s SMEs struggled even more to get affordable finance and experienced increasing difficulties with banks. As a result of weak oil prices in 2016 and slowing economy bank liquidity was restrained and banks became more cautious. When bank lending is reduced, SMEs tend to be more vulnerable and affected than larger companies. The weakening economy was causing difficulties for SMEs to repay their debts. After a wave of defaults, banks started cutting credit lines to SMEs in order to protect their capital. Given the challenging situation for SME in general, capital market financing is practically unavailable for technology-based/innovative SMEs. Therefore, a push by the UAE government to support SMEs was more than necessary.

Given this suboptimal investment situation and the lack of confidence, offering a guarantee from the government-backed institution addresses this type of market failure in an appropriate manner. This especially becomes relevant for innovators standing at the initial stage of market maturity. The literature suggests that loan guarantees can play a significant part in the debt financing of growth and innovation. Government backed guarantees and its share in risk help to create trustworthiness among banks to further provide loans. These loans may be further negotiated for the short or long term and thus offer certain flexibility to innovators and SMEs. Also, there is no loss or reduction of ownership, which is particularly important for the entrepreneurs themselves and constitute an advantage relative to venture capital. Guarantees are a suitable financial instrument in order to overcome these obstacles.

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3 What’s happening in the Missing Middle? Lessons from Financing SMEs, World Bank, IBRD/The World Bank, 2017
4 For example, according to the 2013 Dubai SME Survey, approximately 80% of Dubai SMEs indicated that personal savings were the main source of finance for initiating their business operations in Dubai.
6 Financing Innovative SMEs in a Global Economy, OECD, Paris, 2004
tighten-credit-idxUSL8N15W3X.
11 “An Overview of Innovative Financial Instruments Used to Raise Funds for International Development”, KFW-
Development Research, 2012
In order to assess the market relevance of the MBRIF and to cross-validate finding in the literature, companies that successfully applied for funding and other stakeholders of MBRIF were questioned on their assessment of the Fund’s relevance and the suitability of the program. In a first step, the general funding situation and obstacles for innovation projects in UAE was evaluated. All innovators and stakeholders interviewed, unanimously agree that the access to affordable funding is the most serious obstacle hindering the implementation of innovative projects.

The interviewed companies and stakeholders strongly confirmed that guarantees act as an adequate instrument (both bankability wise as well as price wise) to address these obstacles. First, the respondents particularly emphasized the function of the guarantees as an alternative to venture capital funding. Second, the interviewed companies appreciated the positioning of MBRIF in the funding landscape and the associated stimulation of this sector. MBRIF fills an important market gap in UAE by encouraging and facilitating the issuance of commercial bank loans to innovative companies and are perceived as an affordable alternative to other forms of early stage funding. Moreover, the projects’ viability as the decisive reason for funding eligibility and, related to that, the attraction of international innovators is emphasized as MBRIF’s key differentiator.

Due to the adequacy of the guarantees as a suitable finance instrument, all respondents attach greatest importance to MBRIF for improving innovation financing in the UAE. Different aspects contribute to the high relevance attributed to the Fund: the government affiliation, the possibility of extending the client portfolio of banks granting loans, the fact that a comprehensive business plan and sustainable element of innovation is required and sufficient for potential funding and the assessment of the MBRIF as one of the few sources of indirect funding in the UAE.

### 2.2. Program Implementation

#### 2.2.1. Analysis of received applications

As of the third quarter in 2018, MBRIF received 153 applications since the program start in November 2016\(^\text{12}\) which amounts to an average number of 18 new applications per quarter. Tracking the development of application numbers over time (see Figure 4), it can be seen that the demand for the program increased significantly over the two years (16 applications per quarter in 2017; 27 applications per quarter in 2018). The initially lower levels of applications is characteristic for newly adopted programs, as companies only gradually become aware of the new funding opportunity and need to assess its’ relevance for their businesses. At the same time, the surge in demand later on suggests that MBRIF indeed addresses a funding need in the target group and successfully manages the ramp up phase.

\(^{12}\) This includes eight applications received during the pilot phase of the program before Q1 2016.
Figure 4: Cumulative number of applications since program start

Source: Monitoring data MBRI, PwC analysis

Of the 153 applications, 54 applications were rejected and 83 were still under review and 13 pending at the time of the analysis. Differentiating the status of the application by the time of application, it can be seen that all of the applications received in 2018 are still under review, and also about half of the applications received during the last two quarters in 2017. While ensuring a rigorous assessment of the received application, the multi-staged revision process (see chapter 2.2.3) takes a rather long time to go through and is perceived as an element of potential improvement.

An analysis of the reasons for not granting loan guarantees (see Figure 5) shows that the rejections are related to either unsound business planning - 61% were rejected due to weak or non-existent business plans (ca. 61%) – or were rejected due to a weak innovative element of the proposed projects (19%) or the “lack of a footprint” (17%), relating to the program objective of promoting the visibility of the UAE in the international innovation scene. According to interview information, most of the applications (90%) were rejected in the early stage of assessment. Only 10% were rejected at second and last stage of assessment.\(^\text{13}\)

\(^\text{13}\) For an overview of the application and revision process see chapter 2.2.3.
Applications by sector

While MBRIF accepts applications from innovators of all sectors, the focus of the support program lies on the innovation priority sectors defined by the National Innovation Strategy (NIS). Among the 153 applications received, the majority of applications (75%) related to at least one of innovation priority sectors (see Figure 6). The most important sector is “Technology” (45% of applications), which may be driven also in parts by the broad definition of this sector. The rest is approximately evenly distributed over the other priority areas – the only priority sector not covered so far is “Space”.

Figure 6: Sectors of the applications

Source: Monitoring data MBRI, PwC analysis, N=153.

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14 Renewable and Clean Energy; Transportation, Technology, Education, Health, Water, Space

15 The NIS does not further specify the definition of the sector, the sector hence covers innovative technological advancements in a variety of applications, e.g. information and communication technologies (ICT), nanotechnology, biotechnology, etc.
Nationality of Applications
The MBRIF is the first program allowing non-nationals to apply, the only prerequisite being that the business are located or planning to relocate to the UAE. With this it is ensured that the application process of MBRIF focuses on the projects’ viability, rather than nationality. According to information from stakeholder interviews, there is a strong trend towards applications from the broader region such as Jordan and Lebanon. MBRIF has also received applications from the US (education) and strives to expand the diversification of its guarantee portfolio addressing needs in the UAE and regional markets to enhance SDG impact through project delivery.

2.2.2. Analysis of the granted loan guarantees

The successful applications received a loan guarantee with an average volume of AED 4.8 million (approx. USD 1.3 million). The rigorous selection process focused on convincing business cases, thereby minimizing the risk of defaults. Among the three selected firms, two addressed the innovation priority sector (Technology and Education), the third (Pure Harvest) is at the cross-section of agriculture and technology by applying high-tech hydroponics and climate management technologies.

<table>
<thead>
<tr>
<th>Company</th>
<th>Business Case</th>
<th>Sector</th>
<th>Guarantee</th>
<th>Received</th>
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<tr>
<td>Oliv (formerly InternsME) founded in 2012</td>
<td>Oliv is a career platform for the youth that connects students and new graduates to employers for internships (a new concept in the region), part-time and graduate jobs.</td>
<td>Technology</td>
<td>AED 2 million (ca. USD 540,000)</td>
<td>November 2017</td>
</tr>
<tr>
<td>Pure Harvest Smart Farms founded in 2016</td>
<td>Pure Harvest Smart Farms is a regional innovator in sustainable agriculture focused on the production of premium fruits and vegetables in the challenging climates of the Arab Gulf region using world-leading controlled-environment agriculture technologies. Currently the production facilities comprise about one hectare, but there is potential for over 100 hectares of greenhouse produced fruits and vegetables.</td>
<td>Agriculture/Technology</td>
<td>AED 5.5 million (ca. USD 1.5 million)</td>
<td>October 2018</td>
</tr>
<tr>
<td>Lamsa founded in 2012</td>
<td>Lamsa is an Arabic Children’s Edutainment app that addresses the need for higher quality in learning the Arabic Language. Lamsa confronts the linguistic deficit by providing high-quality Arabic language content (engaging fun and interactive stories, games and videos) for children up to 12 years throughout the Middle East.</td>
<td>Education</td>
<td>AED 7 million (ca. USD 1.9 million)</td>
<td>July 2018</td>
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Source: Monitoring data MBRI and Crunchbase
2.2.3. Adequacy of the application and revision process

Interested start-ups and SMEs can submit their applications continuously throughout the year, but the revision of applications and decision takes place within a pre-defined, well-structured two-month cycle. The application and revision process of MBRIF is organized in six steps (see Figure 7):

1. **Online Application**: Interested start-ups and SMEs submit their application (including all necessary documents) online.

2. **Due Diligence Light**: MBRIF conducts a first review of submitted documents and assess the potential for success. If required, the applicants are asked to provide further information.

3. **Service Fee Online Payment**: Afterwards applicants that were given a positive rating in the course of the due diligence light assessment will pay a service fee. This fee amounts to 0.1% of the total requested credit amount (minimum fee: AED 500, maximum fee: AED 5,000).\(^\text{16}\)

4. **Due Diligence**: Based on a detailed due diligence MBRIF assesses the application and submits a recommendation report to the Advisory & Decision Committee.

5. **Advisory & Decision Committee**: The advisory & decision committee makes the final decision (wining the guarantee or rejection). The final decision is subsequently ratified by the MoF.

6. **Final Decision on Guarantee**: MBRIF communicates the final decision (letter of intent) and the process of signing the documents starts (if applicant already has a lender).

Figure 7: Application Process of MBRIF

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<tr>
<td>Check for potential success</td>
<td>Based on innovation and commercial measures</td>
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Source: PwC

In the following, the application and revision process of MBRIF is evaluated in more detail. The evaluation focuses on the overall assessment and the average duration of the application and revision process. The data base for the analysis are semi-structured interviews with successful applicants, the stakeholder of the program as well as the application statistics of the MBRIF.

Overall, the application and revision process was assessed positively by the interviewed applicants. Nevertheless, the respondents also indicated that there is room for improvement, especially in connection with the duration of the application and revision process.

According to the MBRIF website, MBRIF expects the entire application and revision process (from online application till communication of final decision) to take a maximum of 10 weeks provided all applicant’s documents are submitted and the service fee is payed directly after receiving the request.

As described in chapter 2.2.1, the actual application and revision process takes longer on average: some projects are still under review or pending more than 12 or even 15 months after application. By cross-validating the monitoring data and interviews, the findings from the monitoring data correspond to the feedback from the interviews in which the participants reported an average processing time of 6 months (see Figure 8).

**Figure 8: Duration of application and revision process**

| Expectation: 10 weeks | Average: 3 - 6 months | Projects under review/pending: > 12 months | Projects under review/pending: > 15 months |

*Source: PwC*

While the longer duration of the application and revision process was expected by a company of the pilot phase, a company whose project was assessed in the regular phase demanded an improvement of the process and a shortening of the processing time. From the company’s point of view the application and revision process should be streamlined by reducing the number of layers of decision. Additionally, the process for updating the documentation after changing the name of the company could be more efficient.

Missing or incomplete applicant’s documents which require additional processing by MBRIF (e.g. repeated reviews of applicant’s business plan), or a slower than previously expected response time of applicants in case of queries may also increase the processing time during the application process. Nevertheless, we recommend MBRIF to monitor the application and revision process more closely in order to identify phases where applicants could be provided with more information and support in advance to streamline the process.

### 2.2.4. Public Relations and stakeholder engagement

There is a high importance of targeting the external public – the target group (potential applicants) as well as the broader public, i.e. especially stakeholders to be used as multipliers - by funds to increase visibility in the shorter term and also for their success longer-term. To raise awareness of the target group - i.e. innovative start-ups and SMEs based or willing to be based in the UAE - public relation measures should be applied to draw attention of companies.

On its comprehensive website, MBRIF provides general information on the fund, stakeholder involved and the application and revision process. In addition, further stakeholder (e.g. United Arab Emirates Ministry of Finance, Emirates Development Bank, RAKBANK) inform interested companies about MBRIF. In order to assess the relevance of the MBRIF’s public relations and the information channels used, companies whose applications were approved, were asked how they became aware of MBRIF.

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17 Mohammed Bin Rashid Innovation Fund: https://www.mbrinnovationfund.ae/en/
18 United Arab Emirates Ministry of Finance: https://www.mof.gov.ae/en/About/programsProjects/Pages/MohamedBinRashidInnovationBox.aspx
Companies and stakeholder interviewed confirm that companies in the target group are aware of the program or even have applied. They emphasize that the popularity comes from a broad set of marketing measures that is applied in the relevant areas for innovative companies. One company mentioned that they encountered MBRIF during an exhibition (GITEX\(^9\)). That shows a wide range of marketing activities beyond the standard instruments of website marketing and flyer. Also from an economic perspective a high level of media coverage is expected to have increased the visibility of the innovation scene in the UAE therewith addressing the objective of promoting the location as innovation hub in the region. Some of the interviewed companies suggested to broaden media coverage by pushing coverage relevant international media, which would not only benefit the companies but also contribute to the visibility of the MBRIF internationally and support the objective to draw foreign innovators to the country. In line with that, the fund aims at moving from push to pull marketing and more targeted attraction. This is done by collaborating with Area 2071\(^20\), Dubai Future Foundation\(^21\) etc. to interface with clients and interested parties alike.

MBRIF cooperates with the local banking sector. To maximize the potential to be a driver within the ecosystem, the relationship with the ministries, regulators and other stakeholders such as accelerators and universities is important for MBRIF and, based on the interview feedback, a unique aspect of the fund in comparison with other innovation programs.

### 2.3. Short-run impacts of the program

All successful applicants received a loan upon receiving the guarantee. The loan was issued by the RAK BANK, which currently constitutes the only partner bank of the MBRIF. In all three cases, the commercial loan volume was identical to the volume of the guarantee (i.e. 100% guarantees, see chapter 2.2.2). As expected, the conditions of the loans were significantly more favorable compared to the take-up of a loan without the guarantee, if that loan would have been granted at all based on loan underwriting standards of the respective commercial banks. None of the firms needed to provide additional collateral, and interest was more than halved from on average 15% to approx. 7% p.a. Based on the average loan volume of AED 4.8 million (approx. USD 1.3 million), firms hence saved up to AED 380,000 (approx. USD 100,000) per year due to the reduced interest rate.\(^22\)

For two of the firms, the government backed loan was the only source of funding during this period. One of the applicants additionally managed to receive financing from a venture capital firm, another one enhanced its negotiating position in a VC deal through the government backing. This suggests that the loan may have provided a positive signal to other investors, allowing firms to tap into further funding opportunities and structure their cap tables more favorable. In particular, passing the intensive and rigorous due diligence process of the MBRIF is likely to convince investors about the quality and growth potential of the companies, thereby increasing incentives to invest in the firms- supporting the more conservative approach of underwriting transactions.

An additional immediate positive effect of receiving the funding was the subsequent increase in public visibility. The decision of the innovation fund to promote the companies was highly publicized in the regional media, drawing attention to the firms and ensuing further coverage in relevant online media.

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\(^{19}\)https://www.gitex.com/
\(^{20}\)https://area2071.ae/
\(^{21}\)https://www.dubaifuture.gov.ae/
\(^{22}\)A more detailed calculation of the reduced lending costs is impeded by the heterogeneous loan conditions of the firms (amount of the principal, duration of the loan and grace period).
outlets. The increased media attention is likely to benefit the development of the firms by making potential customers as well as employees aware of their business.

Overall it can be concluded that the predominant objective of the MBRIF, i.e. to reduce the financing gap of innovative firms and enabling access to affordable funding was achieved by the program. Further positive short-run effects, such as the positive quality signal given by fund as well as the increased media attention are likely to further contribute to the development of the firms.

### 2.4. Expected medium to long-run SDG impacts

With respect to the projects that could be realized due to the funding, the companies confirmed that the additional funding allowed them to finance important activities needed to further develop their businesses, e.g. investing in relevant technologies or initiating the production process. The loan thus contributed significantly to the expansion of companies, ensuring their foothold in the market and building the foundation for further business growth.

The assessment of the longer-term economic and SDG impact of the additional investment induced by the MBRIF is difficult to assess with certainty, as firms usually cannot differentiate between the singular effects of the additional investment due to the guaranteed loans and other activities to expand their businesses. It has to be kept in mind, that the approximation of the longer-term effects only after a year (or less) of receiving the funding may underestimate the overall impact of the program. Focusing on the three main company-level objectives of the fund, we asked companies to estimate the impact the funding had on their revenue, employment and internationalization.

#### Revenue

Companies stated that the fund had a positive impact on their long-run revenue stream by accelerating business growth. One company stated that their business would not have been able to be launched without the funding and therefore attributed all of their expected revenues (AED 6 million, USD 1.63 million) to the impact of the program. The initiation of an innovative platform by another company was estimated to conservatively generate AED 10 million to AED 30 million (USD 2.7 million to 8.2 million) in terms of economic impact. This shows the high magnitude of the businesses supported and the importance of additional financing of the Fund being one central element for this expansion.

#### Employment

All of the companies were micro or small businesses when they applied for funding and all of them stated that due to the funding, they expanded the number of employees significantly. In total, it was estimated that over 30 additional jobs were be created due to the funding, which increased employment at the companies by around 25% on average. Moreover, through international value chains one company also triggered international employment effect and thereby supporting economic growth in other countries as well. As stated before, it is likely, that these estimates are

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23 An approach used to measuring the causal effects of the additional investments is the so-called control group-approach, where the development of similar firms is compared to the development of firms receiving the MBRIF guarantee. Due to the innovative and novel character of the businesses, similar firms are however difficult, if not impossible, to identify, risking an overstatement of the impact of the program. The control group strategy was therefore not further pursued.
downward biased, as all companies expected to grow further as demand for their product or services continues to grow.

**Internationalization**

With respect to internationalization of their businesses, the MBRIF was said to foster further internationalization of companies by acting as a seal of quality. One company had already expanded to the Kingdom of Saudi Arabia and had specific plans to expand to other countries in the region as well as Europe and stated that

> “having received the guarantee from MBRIF is always seen as a “wow-factor” by investors, facilitating entry also in other markets beyond the UAE.”

Overall, by enabling the companies to invest in their innovative businesses, the MBRIF lays the foundation to the long-term growth of companies. Beyond the assessed shorter and longer term impacts on the whole economy, the MBRIF also contributes, directly and indirectly, to the achievement of the objectives of the innovation priority sectors of the NIS and also the UN Sustainable Development Goals. By creating additional employment, *the program supports SDG goal 8* (“Decent work and economic growth”) through its broader economic impact in terms of economics growth and job creation by promoting the growth of young, innovative firms.

While the exact revenue and employment effects of the MBRIF need to be addressed by longer-term evaluations, the evidence from the companies to date suggests that the promotion concept of the MBRIF achieves the intended goals of showcasing the innovative potential of the country and fostering innovative growth. It is hence expected, that by continuing on its path impacts will multiply and thereby, promoting sustainable growth and productive employment for the broader region. MBRIF is well positioned to significantly contribute to the long-term competitiveness and strengthen the regional innovation and entrepreneurial ecosystem in the UAE.

**2.5. Indirect Impact on SDGs and NIS**

By its design MBRIF is also linked to *SDG goal 9* (“Industry, innovation and infrastructure”) by focusing on small or medium businesses, encouraging innovation and adding to the diversification of the regional economy.

Through its sectoral priorities, e.g. in the field of education, healthcare, energy, water and transportation it also indirectly impacts SDG goals by directly addressing advancement in the other SDGs. By promoting innovative businesses in these areas the program incentivizing innovation in these areas which then contribute to these goals (see table below).

<table>
<thead>
<tr>
<th>SDG</th>
<th>Innovation Priority Sector of the NIS</th>
<th>Target match between NIS/ SDG and MBRIF</th>
<th>How targets are addressed by the MBRIF and the supported projects</th>
</tr>
</thead>
</table>
| Goal 8: Decent work and economic growth | • Achieve higher levels of economic productivity  
Promote sustained, inclusive and | • Promote development-oriented policies | • MBRIF targets are directly aligned with the objectives of the SDG.  
• By creating employment (see impact evaluation results), the level of unemployment is reduced. |

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<table>
<thead>
<tr>
<th>Goal 3: Good health and well-being</th>
<th>Healthcare</th>
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</thead>
<tbody>
<tr>
<td>Ensure healthy lives and promote well-being for all at all ages</td>
<td>Reduce the proportion of youth not in employment, education or training</td>
</tr>
<tr>
<td>• Support the research and development of vaccines and medicines for the (non) communicable diseases</td>
<td>• One of the projects funded promotes the integration of youth in the labor market and has so far facilitated over 5,000 placements.</td>
</tr>
<tr>
<td>• Provide access to medicine for all</td>
<td>• MBRIF has a special focus on innovative projects in the area of health care</td>
</tr>
<tr>
<td>• Increase health financing and the recruitment, development, training and retention of the health workforce</td>
<td>• A company of the healthcare sector was already part of the pilot phase. It had a solution for diabetics to push notifications and remind patients to take medicine. It was the first of kind in the region and Arabic as langue embedded, by that addressing regional prevalence of diabetes.</td>
</tr>
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<tr>
<th>Goal 4: Quality Education</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</td>
<td>Increase skills, including technical and vocational skills, for employment, decent jobs, entrepreneurship</td>
</tr>
<tr>
<td>• Increase literacy and numeracy for all</td>
<td>• MBRIF has a special focus on innovative projects in the area of education.</td>
</tr>
<tr>
<td>• MBRIF has a special focus on innovative projects in the area of education.</td>
<td>• One of the projects funded fosters early childhood education for kids between 3 and 8. By this innovation, the company won a UN award.</td>
</tr>
<tr>
<td>• One of the projects funded promotes the integration of youth in the labor market, among other things for internships, resulting the placement of over 200 Emirati nationals to date.</td>
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<tr>
<th>Goal 6: Clean Water and Sanitation</th>
<th>Water</th>
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<tbody>
<tr>
<td>Ensure availability and sustainable management of water and sanitation for all</td>
<td>Expand international cooperation and capacity-building support in water- and sanitation-related activities and programmes</td>
</tr>
<tr>
<td>• MBRIF has a special focus on innovative projects in the area of water.</td>
<td>• One of the pilot phase companies was in desalination and energy production to increase (i) water quality and accessibility for clean water and sustainable energy)</td>
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<tr>
<th>Goal 7: Affordable Clean Energy</th>
<th>Renewable and Clean Energy</th>
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<tr>
<td>Ensure access to affordable, reliable, sustainable and modern energy for all</td>
<td>Ensure universal access to affordable, reliable and modern energy services</td>
</tr>
<tr>
<td>• MBRIF has a special focus on innovative projects in the area of renewable and clean energy</td>
<td>• One company under review produces clean energy through mobile solar “mini power plants” esp. for the poorest (labor camps, remote areas).</td>
</tr>
<tr>
<td>• Increase the share of renewable energy in the global energy mix</td>
<td></td>
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</tbody>
</table>
Goal 9: Industry, Innovation and Infrastructure
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

<table>
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<tr>
<th>Transport, Technology</th>
<th>• Double the global rate of improvement in energy efficiency</th>
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<tr>
<td></td>
<td>• Promote inclusive and sustainable industrialization and, by 2030, raise industry’s share of employment and GDP</td>
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<td></td>
<td>• Increase the access of small-scale industrial enterprises to financial services</td>
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<td></td>
<td>• Support domestic technology development</td>
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<tr>
<td></td>
<td>• MBRIF targets are directly aligned with the objectives of the SDG: facilitate innovation activities by bridging a funding gap, stimulate public-private collaboration in innovation</td>
</tr>
<tr>
<td></td>
<td>• MBRIF focuses on small and medium enterprises.</td>
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</table>

The companies promoted so far, are exemplary of these large-scale indirect effects on the SDG’s the program is expected to unfold.

- **Oliv:** Addresses the challenge of youth unemployment which is rooted in the insufficient linkage between the education system and the labor market by matching youth and companies in internships. To date more than 5,000 job placements were facilitated by the company with 50% of the female applicants matched.

- **Lamsa:** Addresses the challenge of inclusive learning environment which is rooted in the low availability of child sensitive learning material by offering an Arabic Edutainment app that provides information suitable for kids and by this fosters learning for kids between ages 3 to 8.

- **Pure Harvest:** Addresses the challenge of ecologically friendly food production by implementing and using world-leading controlled-environment agriculture technologies. By this, Pure Harvest helps to increase productivity and food production and to maintain ecosystems.

By fostering a culture of sustainable leaders that work in an ecosystem creating value chains beyond the innovative ideas, MBRIF shapes the UAE’s positioning in creating entrepreneurship, self-employment, and sustainable, gender equal employment. As all projects are designed for the longer term, it is expected that their significant positive effects will continue to be visible and even increase in the future. In addition, the increasing awareness of MBRIF, which is currently still in its ramp up phase, will increase the number of funded projects. Based on the success of the three projects similar positive effects can be expected from potential future projects. The selection of projects, performed by international and local experts (incl. **Nobel Laureates, academia**) ensures consistent decision making and long term success of MBRIF for the greater good.
3. Synthesis and conclusions

As of the third quarter of 2018, the MBRIF received 153 applications for innovation financing since the start of the program. The surge in demand suggests that the MBRIF indeed addresses a funding need of the target group and successfully managed the ramp up phase. Moreover, 75% of applications are related to at least one of innovation priority sectors. The three successful applications received a loan guarantee with an average volume of AED 4.8 million (approx. USD 1.3 million). The rigorous selection process focused on convincing business cases, thereby minimizing the risk of defaults and boosting investor confidence. Moreover, the international component — the fund is open to non-Emiratis and one of the guaranteed companies has started expanding internationally with MBRIF support — and the market statement of AED 2 billion raise strong expectation that the success story will continue.

In general, public perception of MBRIF is very positive. A broader range of marketing activities beyond the standard instruments have already been applied by MBRIF. It aims at moving further in the direction of pull marketing, i.e. stronger demand based attraction of relevant innovation into the UAE further propelling the impact focus of the intervention. Broadening media coverage by pushing international media can be seen as a potential future avenue to increase visibility even further and especially to attract international companies.

By bringing innovative solutions into the region, MBRIF creates positive short-term and long-term impacts for the broader UAE region. In the short-term with a direct positive impact and as a central starting point loans were much more favorable compared to the loans without the guarantee and thereby foster innovation projects as a direct output of the MBRIF. Moreover, interviews indicate a strong quality signal — allowing firms to tap into further funding opportunities — as well as an increased media attention. Furthermore, as an indirect consequence, one of the companies (Oliv) leveraged more than 5,000 jobs that would not have been created in that dimension without the support of MBRIF.

The MBRIF supports the establishment or expansion of companies, ensuring their foothold in the market and builds the foundation for further business growth. Importantly, in the light of the SDG 8, the fund had a positive impact on the companies’ longer-term revenue streams by accelerating business growth, as stated by successful applicants. By continuing the funding and increasing the number of firms benefiting from the affordable loans, impact are expected to multiply in the coming years. As a direct consequence, over 30 additional jobs were created due to the funding, which amounts to an average increase of around 25% of the employment in the companies, thus paving the way of productive employment and decent work.

Thus, the promotional concept of the MBRIF achieves the intended goals of showcasing the innovative potential of the country and fostering innovative growth. From an economic perspective, impacts may likely exponentially grow in the future when the fund fully leaves ramp up phase. The fund is expected to significantly contribute to the long-term competitiveness of the region and strengthen the regional innovation and entrepreneurial ecosystem in the UAE.

The fund explores introducing additional products to further stimulate the innovation ecosystem and maximize its impact. The fund has the aspiration to grow into other funding concepts potentially in order to complement the product portfolio and enhance the hand-holding and continuous engagement with its beneficiaries in their future growth. MBRIF aims thereby also to increase its relevance through addressing the specific financing needs of a broader group of companies, and hence, increase the impact of innovative activities. Alternatively, MBRIF could also speed up portfolio growth and impact through a higher number of smaller tickets (from 10 to 5 M AED) resulting in the same overall exposure along with more risk appetite.
The conservative selection process – relatively low conversion rates and the multi layered revision process - suggest scope for improvement: As many firms seem to be unable to provide a suitable and convincing business plan to back their innovative projects, further assistance could be offered to them prior to the application. We recommend MBRIF to monitor the application and revision process more closely in order to identify phases in which applicants could be provided with more information and support. This may guarantee a higher quality of the applications received, thereby reducing the resources and the time needed for the revision process at the MBRIF and increasing success rates without adversely affecting the quality of the portfolio while harvesting more impact effects. First steps are taken forward to address this issue by the MBRIF. It plans to set up an accelerator program that aims at even closer and institutional support and supervision, and fosters (international) stakeholder engagement.

Last, but not least, a stronger collaboration between other ecosystem stakeholders and funding partners and MBRIF will result in further beneficial effects of co-funding, shared/mitigated risks and specific solutions for the market combined with impactful projects. Complementing financing partners that can take up the growth phase and internationalization from the UAE indicate a continuous support framework warranting a more streamlined and effective promotion lifecycle. That room for stronger collaboration between stakeholders in the future, even with co-financing elements, creates higher volumes of funding and even broader economic and SDG related impact in the UAE and Middle East and East African regions.