

# Assessment of the Competitiveness of Implementation of Islamic Financial Technologies

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**Abstract**—Islamic finance technology is dynamically evolving not only as a tool that can improve financial performance, but also as a way to increase sustainability and efficiency. Technology offers new ways of integration for those excluded from the financial services industry, while ensuring that they have access to a wide range of financial products in line with their values. There is no doubt that Islamic fintech is in its earliest stages of development. Nevertheless, the introduction of Islamic financial technologies and the assessment of their competitiveness are of particular interest. This research provides index of competitiveness of the implementation of Islamic fintech. This index is developed to compare and assess the competitive situation of 73 countries with Islamic fintech implementation. Such indices might have practical use in decisions-making for business investment and international markets penetration strategies.

**Keywords**—islamic finance, fintech, index; digitalization

## I. INTRODUCTION

Islamic financial technology (Islamic fintech) is the integration of technology into Islamic finance, which means that any product or service formed in the Islamic fintech environment complies with the rules and regulations of Sharia. Islamic fintech involves the deployment of new technology business models to advance economic, environmental, financial and social goals that include improving the parameters of operations for all Islamic financial services and products, and is also initially focused on improving financial inclusion, poverty alleviation and social justice. [1] [2] The demand for Islamic products increases due to the success of Islamic Financing and banking systems in many countries. [3]

Islamic fintech competitiveness assessment is based on qualities of the environment within which they develop. Islamic fintech is part of the financial sector, the functioning of which involves the use of technology and compliance with Sharia law.

It is estimated that the number of Muslim consumers worldwide in 2019 was about \$1.8 bln. [4] The Islamic economy has a direct impact on the following nine sectors: halal food, Islamic finance, clothing (modest), Muslim-friendly tourism, media and leisure (Islamic themes), halal pharmaceuticals, halal cosmetics, education and etc. Analysts estimate the aggregate consumer opportunities in the main sectors of the Islamic economy at \$ 2.28 trillion as of 2018 and growth to \$3.2 trillion by 2024. [5]

While fintech is taking Islamic finance to the next level, recent growth still relies heavily on traditional banking services and products, with 15% year-over-year net profit growth. [5] Islamic finance can play a critical role in accelerating national economic growth, as Islamic finance is closely linked to the real sector of the Islamic economy.

In order to get the broad understanding of the national initiatives implementation, we will consider the World Bank's economies classification for 2020: high-income (Saudi Arabia, Bahrain), upper-middle-income (Malaysia), lower middle income (Pakistan). We also included London, as it is a key hub for Islamic finance in Europe.

In Islamic Republic of Pakistan, the Ministry of Information Technology published Pakistan's Digital Policy, which mentions the establishment of FinTech innovation centers in major cities in the country.

In Bahrain, which is today a regional financial center because of the largest concentration of financial institutions and funds registered and dominant in the region. Bahrain's road to fintech was officially initiated by the Central Bank of Bahrain (CBB). The most notable step was the development of a «regulatory sandbox». Bahrain's Economic Development Board and Fintech Consortium launched Bahrain FinTech Bay (BFB), claiming it will be the largest fintech hub in the Middle East and Africa.

Saudi Arabia created Vision 2030, that implements the Fintech Saudi initiative, to catalyze the development of the financial services industry.

A similar initiative was implemented in Malaysia - the Central Bank of Malaysia, Bank Negara Malaysia (BNM) has a dedicated Financial Development and Innovation department exclusively to FinTech matters. BNM created the Financial Technology Support Group (FTEG) to foster technological innovation and created regulatory sandbox. Islamic Digital Economy platform has been launched in the country aimed at reaching the entire halal industry.

United Kingdom has become one of the world centers of Islamic fintech despite the lack of regulation in this area or any formal ecosystem. UK has one of the most developed Islamic financial sectors in the world. Contribution of the Muslim population to the country's economy is estimated at the level of £31 billion. Internet is the most popular channel for purchasing Islamic financial products and services in the UK. The UK financial system is helping to ensure that Sharia-compliant companies have access to the country's expertise in both fintech and Islamic finance, talent and liberal regulation, making the UK the world's second largest Islamic fintech center in 2019. Moreover, British national market is characterized by comprehensive development of the industry, both in terms of economics and finance, as well as in terms of legislation and education. [5]

Many countries at the national level are using similar approaches to policies regarding the digitalization of the financial sector. For example, the regulatory sandbox format is used in 15 countries around the world.

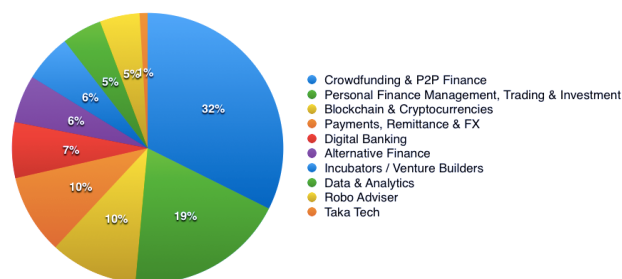


Fig. 1. The structure of the Islamic financial technologies industry in 2020,%. [6]

At the moment, the list of current representatives of the Islamic finance and technology sector consists of 98 companies, but some of them are at the initial stage of entering the market. Most of them are concentrated in a small number of countries. The sectoral structure of Islamic fintech is illustrated below (Fig. 1.). The data shows an uneven

distribution of companies, despite the overall diversification of the industry - 32% for the crowdfunding and P2P sector, another 19% in personal financial management and 10% in the blockchain segment. The share of blockchain projects and cryptocurrencies is relatively high, though there is no conclusive answer of whether cryptocurrency is allowed in Islamic law or prohibited. [7] The smallest offer of Islamic fintech products is observed in the category of robo-consultants (5%), and Islamic insurance technologies (1%).

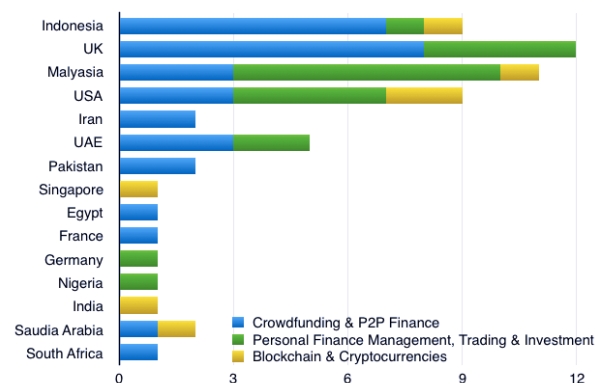


Fig. 2. Geographic structure of the three largest segments of Islamic financial technologies in 2020, %. [8]

The United Kingdom, Indonesia and Malaysia have the most diversified branches of Islamic fintech. The graph above shows that Malaysia's Islamic fintech companies are most prominently represented in the personal finance management category. On the one hand, the level of development of the financial system, ICT infrastructure, human capital, regulation affects the competitiveness of the industry, but on the other hand, entrepreneurial activity also modifies the socio-economic national reality.

## II. MATERIALS AND METHODS

Islamic financial technologies exist because of the demand, that is created by consumers of financial services among the population and by the business. The majority of Muslim population, continues to grow rapidly, also creates one of the basic factors for the penetration, promotion and expansion of Islamic fintech in Muslim society. [9] In addition, the average age of Muslims around the world is 24 years (the global indicator is 32). And 15 of the top 50 countries in terms of smartphone use in 2017 were countries with an Islamic economy. [10]

Digital infrastructure and the level of ICT development in the country are fundamental factors for the expansion of the Islamic fintech industry. And stimulating the digital economy is now part of the national development strategy. Government initiatives in Muslim countries confirm the government's interest in Islamic fintech. The emergence of regulatory «sandboxes» is a natural solution to the problem of adapting the legislative framework.

In addition, the growth of Islamic fintech directly depends on the effectiveness of the work of the agencies that carry out the functions of supervision, standardization and licensing. High-quality audit of companies, maximum disclosure of

sources of profit formation and mechanisms for its distribution, certification of compliance with Shariah norms – all this provides a reliable criterion for determining Islamic organizations, which means that it allows them to accurately find their consumers and investors. The initial stage of development of the Islamic financial and technological industry suggests that now startups play a significant role in its formation, as well as innovative solutions of existing companies.

#### A. Formation of thy Islamic Fintech Competitiveness Implementation

The structure of the index is designed to consider the most significant aspects of the Islamic ecosystem. Our research includes the analysis of results, as well as the methodologies of: Overall Islamicity Index, the Global Competitiveness Index, the Islamic Finance Development Indicator, the Islamic Economy Development Indicator, the Doing Business rating World Bank, Tufts University's Ease of Doing Digital Business (EDDB), Findex 2017 Database, International Monetary Fund Financial Access Survey data, Digital Evolution Index (DEI), databases data on Crunchbase companies, data from the Global Entrepreneurship Monitor, data from the ICT Development Index and general socio-economic indicators from the World Bank database. The analysis showed significant similarities in the composition of various indicators, an acute shortage of an organized database on technical infrastructure provision in Muslim countries, the need to create an open database with global indicators of the Islamic economic sector.

TABLE I.

The Structure of by Islamic FinTech Implementation Competitiveness Index		
Level I	Level II	Level III
Islamic Fintech Implementation Competitiveness Index	1. Competitiveness of the institutional environment	1.1. Normative base of Islamic finance
		1.2. Adaptability
		1.3. Shariah oversight
	2. Level of business activity	2.1. Financing
		2.2. Skilled labor
		2.3. Multilateral cooperation
	3. Degree of market readiness	3.1. ICT penetration
		3.2. Islamic volume financial sector
		3.3. Number of fintech companies

Nevertheless, we selected indicators that could characterize the most significant aspects of the competitiveness of the Islamic financial and technological sector, and grouped them into three blocks (Table 1). All sub-indices are weighted equally in the major index. At level IV, the values were reduced to the corresponding values in within 0-100 according to the formula (1):

$$\tilde{X}_j^k = \frac{x_j^k - x_{\min}^k}{x_{\max}^k - x_{\min}^k} \times 100 \quad (1)$$

$\tilde{X}_j^k$  - the resulting value of the indicator k for the country j;

$X_j^k$  - the initial value of the indicator k for the the country j;

$X_{\max}^k$  - the maximum value of the indicator k among countries;

$X_{\min}^k$  - the minimum value of the indicator k among countries.

The composition of the indicators of the III level indices, as well as the description of the data used, is given in table 3. All indices, starting from the III level, are reduced for comparability purposes to a single scale and can take values 0-100. For example, the components of the Global Competitiveness Index, did not change.

Level II indices are calculated as the arithmetic mean of Level III indices, after which the resulting indicator is also transformed according to formula (1) to obtain an estimate in the range of 0-100. The integral index (level I) is calculated as the arithmetic mean of level II indices.

### III. RESULTS

As a result, we have compiled an index reflecting the comparative readiness of the national economy for transformations through the introduction of Islamic financial technologies. We ranked the countries in descending order of the index value. Results of top 10 countries are presented below (Table 2). Ratings with indices and sub-indices for all countries that participated in the study are presented in table 4. It's worth to mention that Russia overtakes many Arab countries including Egypt and Morocco with significant Muslim. The biggest Russian bank - Sberbank - acquired a stake in the fintech project Payzakat using venture financing tools.[11]

TABLE II. TABLE STYLES

Top 10 Countries by Islamic FinTech Implementation Competitiveness Index		
No	Country	Islamic Financial Technologies Implementation Index
1	Malaysia	95.72
2	United Arab Emirates	80.64
3	Indonesia	66.30
4	Qatar	66.21
5	USA	65.77
6	Saudi Arabia	65.32
7	Singapore	64.63
8	Bahrain	62.77
9	Great Britain	60.53
10	Oman	54.87

The set of countries that are not included in the group of the first 10 states with the highest value of the general index of the competitiveness of the implementation of Islamic financial technologies will be reflected on the map with a color corresponding to the value of the scale (Fig. 3). As you can see, most countries are characterized by intermediate values of the index, while the minimum indicators are concentrated mostly in the African region.

TABLE III

Indicator	Description		
	Measurement method	Source	Year
1. Competitiveness of the institutional environment	Score 0-100	Based on 1.1 – 1.3	2019
1.1 Islamic finance regulatory framework	Score 0-100	Based on 1.1.1 – 1.1.6	2019
1.1.1. The presence of regulation in Islamic banking	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.1.2. Existence of accounting standards regulation	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.1.3. Existence of Sharia applicant regulation	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.1.4. Existence of regulation in Islamic insurance	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.1.5. Sukuk market regulation	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.1.6. Existence of regulation of activities Islamic funds	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.2. Adaptability	Score 0-100	Based on 1.2.1 – 1.2.2.	2019
1.2.1. Timeliness of regulators' response to changes	Raiting score 0-100	WEF <sup>b</sup>	2019
1.2.2. Compliance with the business digitalization regulator model	Raiting score 0-100	WEF <sup>b</sup>	2019
1.3. Sharia supervision	Score 0-100	Based on 1.3.1 – 1.3.2	2019
1.3.1. Having a centralized Sharia council	“1” for “Yes” “0” for “No”	ICD Refinitive IFDI <sup>a</sup>	2019
1.3.2. Number of Islamic scholars with at least one membership in the Sharia Council	Number of people	ICD Refinitive IFDI <sup>a</sup>	2019
2. Business activity	Score 0-100	Based on 2.1 – 2.3	2019
2.1. Financing	Score 0-100	Based on 2.1.1 – 2.1.2	2019
2.1.1. Financing small and medium Business	Raiting score 0-100	WEF <sup>b</sup>	2019
2.1.2. Venture capital availability	Raiting score 0-100	WEF <sup>b</sup>	2019
2.2. Skilled labor	Score 0-100	Based on 2.2.1 – 2.2.2	2019
2.2.1. Significant "digital" skills of the active population	Raiting score 0-100	WEF <sup>b</sup>	2019
2.2.2. Availability of skilled labor	Raiting score 0-100	WEF <sup>b</sup>	2019
2.3. Multilateral cooperation	Raiting score 0-100	WEF <sup>b</sup>	2019
3. Market readiness	Score 0-100	Based on 3.1 – 3.3	2019 -2020
3.1. ICT penetration	Raiting score 0-100	WEF <sup>b</sup>	2019
3.2. Islamic financial sector volume	Score 0-100	Based on 3.2.1 – 3.2.5	2019
3.2.1. Islamic banking assets	\$ mln	ICD Refinitive IFDI <sup>a</sup>	2019
3.2.2. Takaful assets	\$ mln	ICD Refinitive IFDI <sup>a</sup>	2019
3.2.3. Assets of other Islamic financial institutions	\$ mln	ICD Refinitive IFDI <sup>a</sup>	2019
3.2.4. Total value of sukuk in circulation	\$ mln	ICD Refinitive IFDI <sup>a</sup>	2019
3.2.5. Islamic fund assets	\$ mln	ICD Refinitive IFDI <sup>a</sup>	2019
3.3. Number of fintech companies	Score 0-100	Based on 3.3.1 – 3.3.2	2020
3.3.1. The total number of fintech companies Industries	Score, 0-100 as a result of converting the number of companies, units.	Crunchbase <sup>c</sup>	2020
3.3.2. Number of Islamic fintech companies	Score, 0-100 as a result of converting the number of companies, units.	Crunchbase <sup>c</sup>	2020

<sup>a</sup> Global Competitiveness Report 2019 // World Economic Forum. - 2020.- URL: <https://www.weforum.org/reports/global-competent-report-2019> (date accessed: 05/12/2020).

<sup>b</sup> Islamic Finance Development Indicator // Refinitiv; ICD. - 2019.- URL: <https://www.zawya.com/islamic-finance-development-indicator/> (date accessed: 05/12/2020).

<sup>c</sup> FinTech Landscape // IFN Fintech; Finocracy. - 2020. - URL: <http://islamicfintechlandscape.com/eng/landscape.php> (date accessed 05/11/2020).

<sup>d</sup> Crunchbase: Advanced company search // Crunchbase Inc.; Verizon Media Tech. - 2020. - URL: <https://www.crunchbase.com/discover/organization/companies> (date accessed: 05/12/2020).

Next, we will look at the composition of the countries that made it into the top 10 for each individual indicator, which will allow us to discover their relative advantages.

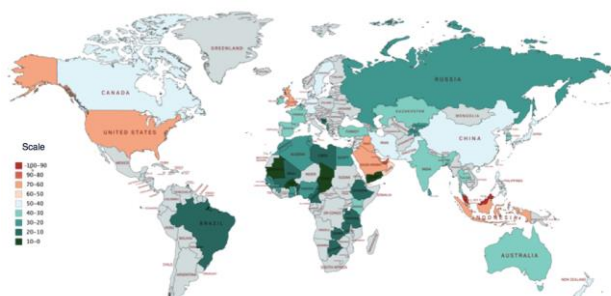


Fig. 3. Ranking countries according to Islamic fintech implementation competitiveness index

## IV. DISCUSSION

The index is designed to assess and compare the degree of actual and potential development of the Islamic financial and economic sector on a country. We pay attention to the fact that a limited number of factors are taken into account in our methodology that gives only basic results.

Nevertheless, selected factors seem to be significant, and therefore it makes sense to analyze the resulting rating in order to understand the strengths and weaknesses of each country in the implementation of a particular component.

### A. “Competitiveness of the institutional environment”

Results indicate that the institutional environment of the above countries is the most consistent with the nature of Islamic fintech. All of these countries have a regulatory

TABLE IV

№	Country	Institutes		Business activity		Market readiness		TOTAL
		№	ID	№	IBA	№	IMR	
1	Malaysia	1	100.00	6	87.17	1	100.00	95.72
2	UAE	4	82.24	10	84.17	4	75.50	80.64
3	Indonesia	2	90.41	26	61.95	9	46.54	66.30
4	Qatar	10	61.75	3	88.50	8	48.39	66.21
5	USA	29	23.78	1	100.00	6	73.54	65.77
6	Saudia Arabia	15	41.30	14	73.96	3	80.70	65.32
7	Singapore	11	51.60	2	89.30	7	53.00	64.63
8	Bahrain	3	88.49	25	62.09	20	37.72	62.77
9	UK	37	18.19	12	79.09	2	84.31	60.53
10	Oman	6	75.32	22	63.62	38	25.67	54.87
11	Hong Kong	43	16.98	9	85.12	10	46.51	49.54
12	Sweden	42	16.99	7	86.83	18	38.87	48.18
14	Luxembourg	23	30.01	13	77.19	23	36.52	47.91
15	Germany	36	18.49	8	86.69	22	36.75	47.31
16	Netherlands	39	17.80	4	87.68	26	35.89	47.12
17	Brunei Darussalam	9	63.96	44	41.33	28	33.88	46.39
18	Kuwait	13	44.83	32	51.32	13	41.73	45.96
19	Pakistan	5	78.82	38	46.50	61	12.53	45.95
20	Jordan	14	43.47	28	61.35	32	30.00	44.94
21	Denmark	44	16.36	11	79.26	19	38.07	44.56
22	Canada	45	15.89	15	73.43	12	43.44	44.25
23	Iran	17	39.54	67	12.28	5	74.26	42.02
24	Japan	52	13.97	19	68.48	16	39.95	40.80
25	Philippines	19	36.52	21	64.95	48	20.55	40.67
26	New Zealand	41	17.50	17	69.69	27	34.64	40.61
27	China	51	14.05	20	65.18	15	41.13	40.12
28	South Korea	50	14.14	27	61.83	11	43.54	39.84
29	Azerbaijan	34	19.30	16	72.60	43	22.61	38.17
30	Kazakhstan	12	46.70	48	38.29	35	29.29	38.10
31	France	49	14.18	24	62.63	21	36.82	37.87
32	Australia	48	15.27	29	59.88	25	36.34	37.87
33	Belgium	58	10.36	18	68.52	34	29.39	36.09
34	Ireland	53	13.90	23	63.25	31	30.04	35.73
35	Turkey	16	40.63	54	29.51	30	31.05	33.73
36	Bangladesh	7	67.39	66	15.51	53	18.04	33.65
37	India	47	15.45	30	57.75	40	25.16	32.79
38	Spain	65	8.78	37	47.82	17	39.54	32.05
39	Thailand	40	17.72	33	51.10	37	26.04	31.62
40	Lebanon	27	26.14	35	48.96	50	18.58	31.23
41	Mauritius	22	31.09	52	33.13	33	29.43	31.22
42	Kenya	24	28.37	34	50.19	56	14.83	31.13
43	Russia	57	11.29	43	41.11	24	36.52	29.97
44	Tajikistan	20	33.50	39	45.52	63	10.72	29.91
45	Nigeria	8	64.64	68	10.41	57	14.41	29.82
46	Seychelles	46	15.54	36	47.94	41	24.96	29.48
47	Marocco	18	37.43	55	28.29	51	18.24	27.99
48	Egypt	30	22.60	45	40.99	52	18.17	27.25
49	Sri Lanka	31	21.78	41	42.84	55	15.18	26.60
50	Cyprus	62	9.51	46	40.03	36	26.75	25.43
51	Rwanda	35	19.14	40	43.25	58	13.74	25.37
52	Ghana	56	11.74	42	42.45	49	19.95	24.72
53	Tunisia	25	28.17	60	24.66	47	20.68	24.50
54	Gambia	21	31.32	53	30.77	64	10.54	24.21
55	Guinea	64	8.98	31	53.40	65	9.13	23.84
56	Kyrgyzstan	28	25.89	64	19.99	42	24.58	23.49
57	Algeria	60	9.75	50	35.91	44	21.68	22.45
58	Albania	59	9.90	51	35.26	45	21.50	22.22
59	Senegal	55	12.47	49	35.97	60	12.93	20.46
60	Tanzania	54	12.84	47	38.37	69	6.68	19.30
61	Brazil	69	4.71	62	21.93	29	31.18	19.27
62	Zambia	26	27.38	65	16.32	62	12.03	18.58
63	Botswana	66	8.67	58	24.70	54	17.73	17.04
64	Ethiopia	33	20.72	61	24.01	71	4.78	16.50
65	Trinidad and Tobago	71	2.93	63	20.46	39	25.41	16.26
66	Cameroon	67	8.18	56	27.93	68	7.26	14.46
67	Mali	68	7.12	57	25.05	66	8.79	13.65
68	Benin	63	9.07	59	24.67	70	6.48	13.40
69	Bosnia and Herzegovina	72	0.70	69	9.55	46	20.90	10.38
70	Yemen	32	20.88	73	0.00	72	3.79	8.22
71	Burkina Faso	61	9.66	72	2.09	67	8.18	6.64
72	Mauritania	73	0.00	70	3.69	59	13.13	5.61
73	Chad	70	3.53	71	3.10	73	0.00	2.21

environment covering Islamic banking and Takaful, six of them covering all six financial sectors. The adaptability of regulators in these countries differs. For example, the UAE government having the greatest level of adaptability, in terms

of the speed of reaction to changes and in terms of legislative adaptability to the digital reality of business. All countries, except Qatar, have central authorities of Sharia supervision. At the same time, in Malaysia, the largest number of Islamic

scholars that are included in at least one commission for monitoring compliance with Sharia norms (192), in Indonesia there are 136 such experts, in Bangladesh - 176.

#### B. "Level of business activity"

Among the countries in this group, the United States is clearly the most developed in this field. It has the highest level of financing for small and medium-sized businesses, the most accessible sources of venture capital compared to other countries. Business in US does not experience tangible problems with the quality and availability of labor resources. However, it should be noted that the Swedish labor market is ahead of the United States in terms of the quantity and quality of digital skills. Due to the fact that multilateral cooperation is really important for the fintech industry, we included an assessment of the indicator of the activity of external cooperation of national business with other companies in this part. The maximum values for level of multilateral cooperation is typical for the Netherlands, Switzerland and Sweden.

#### C. "The degree of market readiness"

This indicator reflects both the ICT infrastructure available for business and the level of ICT use by the population, which is certainly important for realizing the potential of Islamic fintech. The leaders in this component were the UAE, Hong Kong and Singapore. We also took into account the volume of the Islamic financial sector, because the assets of Islamic banking, takaful, funds, the value of sukuk in circulation and assets of other Islamic financial institutions can be considered an indicator of consumer interest in the services of Islamic financial institutions.

Iran, Saudi Arabia and Malaysia have the largest volumes of the Islamic financial sector among the 10 countries on the list. Finally, the prospects for Islamic fintech, especially taking into account the need for cooperation. That reflects the scale of the actual development of fintech industry and Islamic finance. Today USA is the absolute leader in terms of the size of the fintech industry, the number of companies in the UK is 3 times less. However, Malaysia can be considered as the most developed in the field of Islamic fintech in terms of the number of companies representing the industry.

Our results of assessing the competitiveness of the implementation of Islamic fintech in more than 70 countries, obviously, reflect the situation at a particular moment in time. We see that the experience of Malaysia, Saudi Arabia, the United Arab Emirates and other countries presented above turned out to be the most successful. Nevertheless, the resulting indicator, of course, lacks a time parameter, and therefore open and extremely important questions remain about how the current global crisis will affect the economies of these countries, the Islamic fintech industry, what challenges (and maybe prospects) it presents for providers of Islamic fintech solutions.

Indeed, we noted that one of the most important prerequisites for the active development of fintech was the global financial crisis of 2008, which caused the loss of confidence in the financial system. Researchers associate the 2008 crisis with a new stage in the evolution of fintech -

FinTech 3.0. [12] Moreover, the same events drew the attention of many researchers to the differences between Islamic financial institutions and conventional ones.

On the other hand, economic shocks tend to have the most noticeable negative effect on the least developed economies. We believe that countries where Islamic fintech could have the most demanded socio-economic impact may be thrown back in achieving the Sustainable Development Goals, because Islamic fintech companies really have reasons to "blur" international boundaries and provide financial services. As Sharia-compliant funding grows and mobile and network banking institutions are active, the sector is opening up more opportunities and significant steps are being taken to develop high-tech ecosystems in key markets. Nevertheless, any innovation in technology is permissible in Islam as long as it complies with the Sharia rules. [13]

While Islamic finance concept is developing and spreading all over the world

### V. CONCLUSION

Innovations are changing the financial services industry. The consumer value of existing financial services and products is being transformed by advanced technologies such as blockchain, cloud computing, big data analytics, Internet of Things (IoT), robo-consultants and artificial intelligence, etc.[14] There are still only certain elements of digitalization are being implemented, though in some countries there are large and ambitious projects, including fintech. [15]

Shari'ah compliance is considered to be one of the major challenges for the growth of Islamic fintech. Islamic fintech might pose challenges for Islamic banks and financial companies in terms of operational efficiency, customer retention, transparency and accountability. [16] [17]

Today importance of fintech for the Islamic economy lies primarily in social and ethical implications. Islamic fintech provides elimination of asymmetric information, fraud and mistrust between counterparties, ambiguity in operations and business models, creates a positive resonance effect throughout the supply chain within the Islamic economic ecosystem, which opens up unique ways to build a more equitable and sustainable economy.

Global Islamic fintech market analysis showed that many countries at the national level are using similar approaches to policies regarding the digitalization of the financial sector. National strategies in this area are ubiquitous today, as governments recognize the role of digitalization in strengthening the competitive advantages of countries, the Islamic financial technology industry is part of these advantages.

This research covers analysis of the situation in the industry in 73 countries in which Islamic financial institutions are present. Our analysis of indicators characterizing the institutional environment, the level of business activity and market readiness for the products and services of Islamic fintech allows us to assert that from the standpoint of the totality of the aspects we took into account, Malaysia has the

most competitive ecosystem for the development of Islamic financial technologies.

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