



14<sup>th</sup> International Forum on Islamic Capital Market



# Fintech Ecosystem Development



## Systemic Innovation Problems in Developing Countries

**Reza Payandeh**

Ph.D. in Innovation Management; University of Tehran

reza.payandeh@ut.ac.ir

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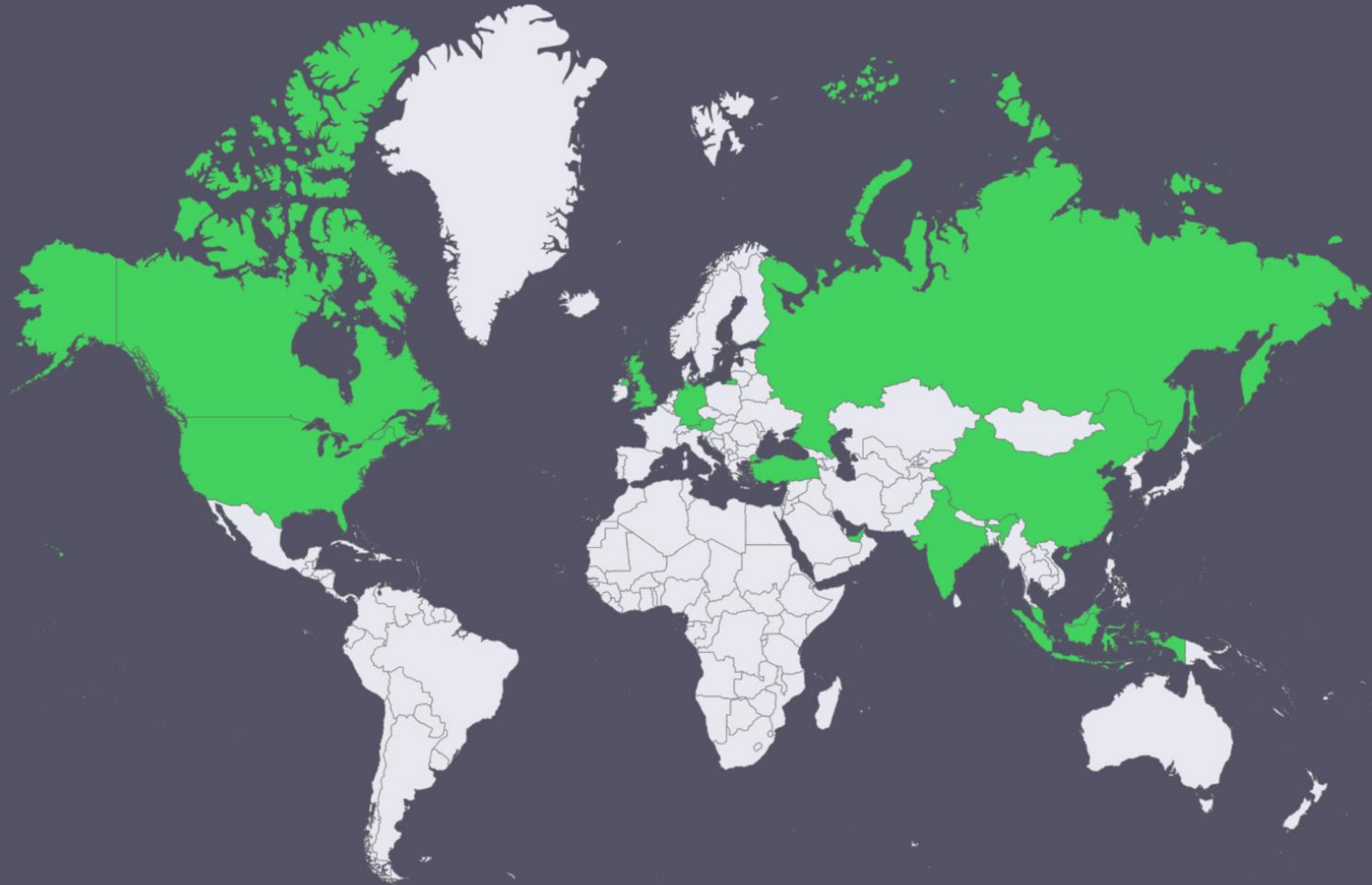
## Fintech Ecosystem

**A set of actors, institutions, infrastructures and interactions that affect the activity of fintechs, which are as follows (Bernardo Nicoletti, 2018):**

- ☐ Policy-making, regulatory and supervisory institutions
- ☐ Investment institutions
- ☐ Scientific and promotional institutions
- ☐ Demand and customers of businesses
- ☐ Fintechs, banks and financial institutions

## Analyzing Fintech Ecosystems in the selected countries:

- ☐ Russia
- ☐ Germany
- ☐ Austria
- ☐ India
- ☐ China
- ☐ Singapore
- ☐ UK
- ☐ US
- ☐ Canada
- ☐ Malaysia
- ☐ Turkey
- ☐ UAE





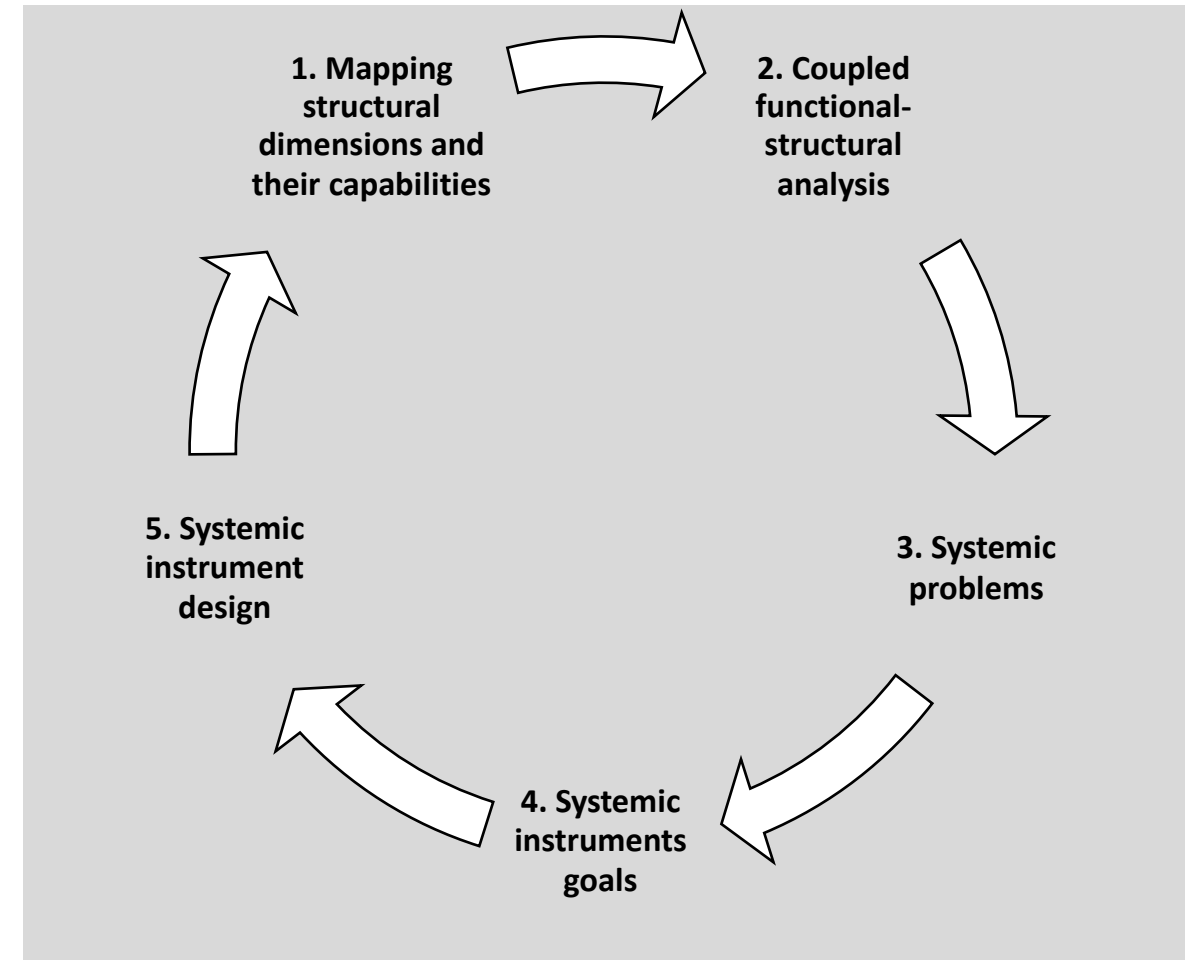
## The Analytical Framework

In this analysis, the system framework of innovation policy written by Wieczorek and Hekkert (2012) is utilized as an analytical framework.

In short, this framework seeks to identify the systemic issues related to the innovation ecosystem, in a prescriptive approach, and propose appropriate systemic tools to deal with these issues.

Wieczorek and Hekkert believe that this framework, by integrating concepts and analyzes that were previously used separately, can significantly increase the insight and awareness of policymakers in recognizing the obstacles and challenges of innovation systems and promoting them.

The following figure shows the successive steps of this process in the form of a reversible cycle:





The data used in this research have been collected from published articles related to financial technologies in a scientific database, online sources, as well as semi-structured interviews with experts and activists in this field in Iran, further, to analyzing the other countries ecosystem.

The analytical texts in a period of one year archived on the *Fintech ecosystem media in Iran* were analyzed and coded using MAXQDA 2020 software.

After the investigations, a total of 682 analytical texts were selected for one year, and among them, 1901 items were coded, of which 306 items are related to fintech ecosystem issues in Iran.

In the table, the information related to each month is represented.

Date	Doc. No.	Theme No.	Problem No.
September 2020	30	51	8
October 2020	60	149	32
November 2020	22	45	12
December 2020	63	129	19
January 2021	29	70	15
February 2021	80	271	46
March 2021	34	41	9
April 2021	67	242	27
May 2021	55	75	16
June 2021	87	516	60
July 2021	62	188	39
August 2021	93	124	23
<b>Sum</b>	<b>682</b>	<b>1901</b>	<b>306</b>



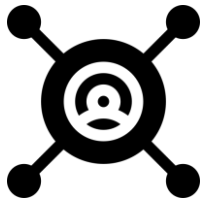
# Innovation System Functions



Are there enough entrepreneurs?  
To what extent do entrepreneurs experiment?  
Are any entrepreneurs leaving the system?  
Are there new entrepreneurs?



Are there many projects, research, patents and articles?  
Does the technology receive attention in national research and technology programs?



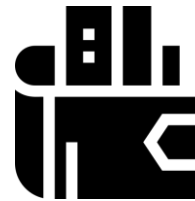
Is the knowledge development demand-driven?  
Is there space for knowledge dissemination?



Is there a clearly articulated and shared goal for the system?  
Is it supported by specific programs, policies, who are the system's frontrunners?  
Does the articulated vision fit in the existing legislation?



What does the market look like?  
What is its size (niche/developed)?  
Must a new market be created or an existing one be opened up?



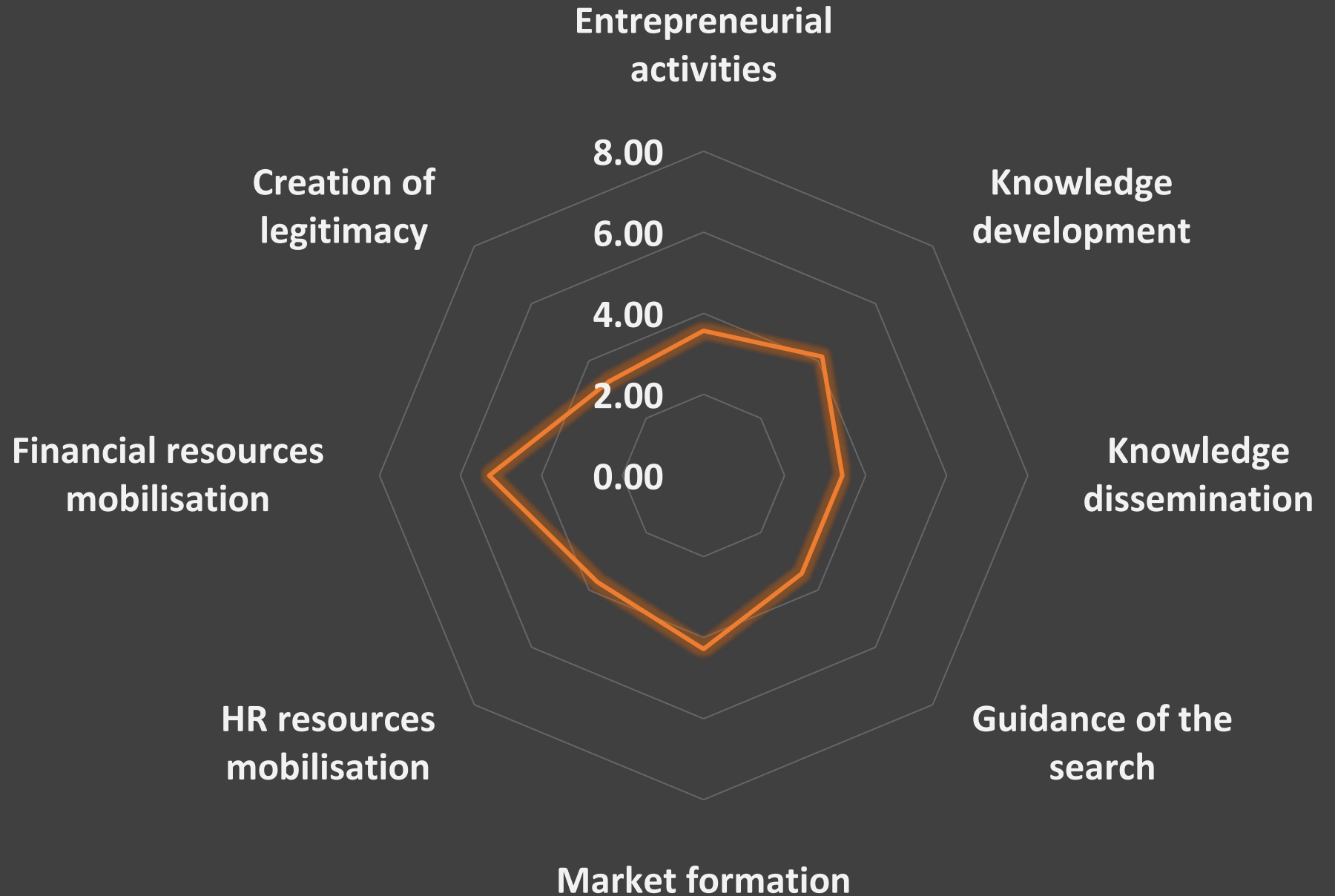
Are there sufficient financial resources for system development?  
Is there adequate public funding?  
Can companies easily access the resources



Is investment in the technology seen as a legitimate decision?  
Where is resistance coming from?  
What is the lobbying power of the actors in the system?



## The Fintech Ecosystem Functions in Iran





# The Fintech Ecosystem Functions in Iran

	Financing	PayTech	BankTech & WealthTech	Capital Market	InsurTech	Digital Asset	RegTech	Average
Entrepreneurial activities	5	6	3	2	2	6	1	3.57
Knowledge development	5	6	4	3	3	6	2	4.14
Knowledge dissemination	3	4	4	4	3	5	1	3.43
Guidance of the search	3	5	3	5	3	3	2	3.43
Market formation	5	7	4	3	3	7	1	4.29
HR resources mobilisation	5	4	4	4	3	3	3	3.71
Financial resources mobilisation	7	6	5	6	4	4	5	5.29
Creation of legitimacy	4	4	5	3	2	4	1	3.29
Average	4.625	5.25	4	3.75	2.875	4.75	2	3.89





1. Compilation of national fintech industry with the aim of integrating the activities of various fintech players in the country.
2. Designing and compiling legal, financial, tax and management requirements and mechanisms of online platforms governance.
3. Cultivation, foundation and institutional networking for the full establishment of the smart government and the formation of the government as a platform based on the seventh development plan of the country.
4. Activation of the infrastructure defense system in the national information network with the aim of maintaining the stability and maximum protection of the financial system and supporting the fintech industry in extraordinary and critical conditions.
5. Networking, institutionalization and platform building for the development of data governance law with the aim of protecting consumer rights, expanding inter-device data exchange, data standards and establishing a registration-based statistics system.
6. Integrated development of regulations and bills related to digital values and assets with the aim of developing the ecosystem of businesses based on blockchain technology and cryptocurrencies in the field of cryptocurrency exchange, exchanges, initial coin offering, mining and other related businesses.



7. Updating the cybercrime law based on the new requirements of fintech businesses by interpreting and rewriting the compensation law based on dual fault-risk. (cyber crime update)
8. Organizing, planning and taking necessary action in order to formulate the law related to the acceptance of electronic evidence and detailing the digital signature law of the electronic commerce law. (acceptance of electronic evidence)
9. Designing a targeted communication landscape with the aim of actively participating in international institutions and expanding regional and international commercial and technological cooperation in the field of digital economy and the development of local platform markets. (Communication ecosystem design)
10. Education, networking and application of financial standards with the aim of increasing knowledge and improving the international capabilities of the country's digital economy. (Using financial standards)
11. Facilitating the establishment of alternative validation systems and businesses in the country's financial system in order to expand the scope of validation, expand it to financial inclusion and reduce arrears. (deployment of alternative validation)
12. Drafting a bill and designing mechanisms to expand the inclusion of financing in the digital platform by activating micro-financing platforms, local financing and person-to-person mechanisms with the aim of expanding social justice and directing liquidity. (including financing)



13. Designing a socio-technological transition to pass the current fee collection model in the country's digital economy and lay the groundwork for the development of new payment tools. (commissioned designer)
14. Compilation of the bill and rewriting of the country's insurance law approved by the National Assembly in 1316, in accordance with the new requirements of the digital economy ecosystem. (rewriting the insurance law)
15. Evaluation, technological update, capacity building and promotion of the smart national card project in line with the digital economy. (updating national card)
16. Setting the groundwork for the formation of commercial platforms for monitoring and regulatory intelligent tools. (Commercialization of monitoring tools)
17. Trust building, public culture and timely information in order to promote digital literacy and financial literacy of the country's people. (Improve financial and digital literacy)
18. Redefining the digital capabilities of the Islamic economy and finance and technologically updating the rules and guidelines of alternative financing in the field of issuing mudarabah bonds, rental bonds, mortgage bonds, murabaha bonds and debt purchase bonds. (Digital Islamic Finance)



19. Design and implementation of the intelligent system of statistics and information of the digital economy and fintech ecosystem in the country.
20. Strengthening the authentication system as a platform at the national level with the aim of strengthening RegTech business models, increasing the security of the FinTech industry, integrating and reducing parallel work.
21. Establishing a smart fintech regulatory system with the approach of de-monopoly, de-regulation and removing barriers to licensing new businesses.
22. Supporting private investment in creating legal cryptocurrency mining pools next to the country's power plants and designing a performance tax collection mechanism by the government.
23. Designing and approving the academic direction of digital economy and fintech in the university with the aim of updating and improving the level of academic and specialized education in order to systematically pursue industry issues, designing the infrastructure of problem-oriented research in this field and training expert human capital and building a labor market that fits the needs of the digital economy.
24. Regulation of direct debit service.