Research on the Construction and Development of "Financing Ecosystem"of Strategic Emerging Enterprises under the Background of Science and Technology Finance

Huachun Dong

Guangzhou Institute of Science and Technology, Guangzhou 510540, China

Abstract: Explores the construction and development of the "financing ecosystem" for strategic emerging enterprises in the context of technology finance. The main research focuses on analyzing the connotations and characteristics of technology finance and strategic emerging enterprises, and elaborating on the concept and constituent elements of the "financing ecosystem". By constructing a "financing ecosystem"model, it proposes a collaborative mechanism and operational mechanism involving multiple entities. The paper also discusses the development paths of the "financing ecosystem", including policy support, market drive, technological innovation, and international cooperation. Finally, it puts forward strategic suggestions for optimizing the "financing ecosystem" to promote the sustainable development of strategic emerging enterprises.

Keywords: Technology Finance;Strategic Emerging Enterprises;Financing Ecosystem;Collaborative Innovation Sustainable Development

1 Introduction

With the rapid development of technology and the continuous advancement of financial innovation, technology finance has become an important force driving the development of strategic emerging enterprises. However, strategic emerging enterprises still encounter many challenges during the financing process, such as a single financing channel, information asymmetry, and high risks. Constructing a mutually beneficial "financing ecosystem" is of great significance for solving these problems and promoting the sustainable development of strategic emerging enterprises. This article aims to explore the construction and development of the "financing ecosystem" for strategic emerging enterprises under the background of technology finance, providing references for related theories and practices.

2 Connotation and Characteristics of Science and Technology Finance and Strategic Emerging Enterprises

Technology finance refers to a system that provides comprehensive financial services for technological innovation and the development of technology-based enterprises through financial innovation and technological means. It has characteristics such as high risk, high returns, innovation, and professionalism. The development of technology finance not only offers diversified financing channels for strategic emerging enterprises but also improves financing efficiency and reduces financing costs through the application of financial technology.

Strategic emerging enterprises refer to enterprises based on significant technological breakthroughs and major development demands, and having a significant leading and driving role in the overall economic and social development. These enterprises usually have characteristics such as high growth, high technology content, high risk, and high added value. The development of strategic emerging enterprises is of great significance for promoting industrial structure upgrading and cultivating new economic growth points. However, due to their high risk and uncertainty, strategic emerging enterprises often face difficulties in obtaining financing under traditional financing models.

3 The Construction of Strategic Emerging Enterprises "Financing Ecosystem"

"financing ecosystem" refers to the financing ecosystem formed by the participation of multiple entities and the interaction of multiple factors in a virtuous circle. For strategic emerging

enterprises, the constituent elements of "financing ecosystem" include enterprises, financial institutions, governments, research institutes, intermediary service agencies, etc. These entities form a collaborative and innovative financing environment through information sharing, resource complementarity and risk sharing.

The construction of the financing ecosystem of strategic emerging enterprises needs to be enabled by science and technology finance,follow objective laws, and help strategic emerging enterprises build a healthier, stable and sustainable financing ecosystem:

(1)From the perspective of "producers", in-depth study on how sci-tech finance provides strategic emerging enterprises with more convenient access to funds by opening up diversified capital source channels and creating new financial service products. In this process, special attention is paid to the effectiveness of the construction of diversified financing channels, as well as how it effectively alleviates the financing bottleneck encountered by enterprises in independent innovation activities, so as to effectively boost the pace of enterprise innovation.

(2) From the perspective of the function of "disintegrator", this paper analyzes the practice and effectiveness of sci-tech finance in building a risk-sharing mechanism. The research will focus on how to effectively assist enterprises to avoid and resolve the uncertain risks encountered in the process of technological innovation by establishing a sound risk compensation mechanism, promoting

the implementation of the cooperation mechanism between the government and the market, and introducing sufficient risk funds. At the same time, simulation models are built to simulate the effects of different risk response schemes, so as to evaluate the contribution degree of sci-tech finance to risk management and control and security barrier construction in the entire financing ecosystem.

(3) Focusing on the optimization level of "consumer" financing ecological environment, explore how sci-tech finance promotes the precise flow of financial resources to strategic emerging enterprises with high development potential through sophisticated resource allocation strategies and strong incentive mechanisms. Design and test a performance-oriented incentive system to verify whether it can effectively guide financial capital to the most innovative potential enterprises through market- oriented means, accelerate the transformation of scientific and technological achievements, and drive enterprises to enter the stage of high-quality development.

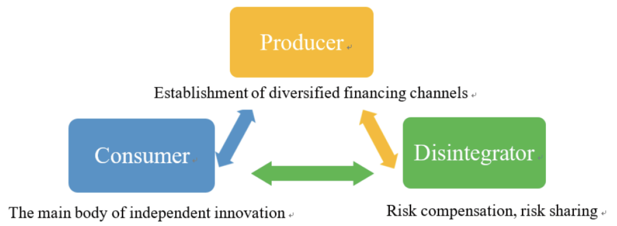


Figure 1 Financing ecological environment: Optimizing resource allocation and strengthening incentive mechanisms

To construct a strategic "financing ecosystem" model for emerging enterprises, it is necessary to consider the relationships and interaction mechanisms among all the entities. The model should center on enterprises, be supported by financial institutions, guided by government policies, and assisted by research institutes and intermediary service providers. It should form a multi-level, multi-channel, and multi-mode financing network. In this model, elements such as information flow, capital flow, technology flow, and talent flow can flow efficiently, thereby achieving the optimization of resource allocation and the reasonable dispersion of risks.

3.1 Innovate Financial Services and Broaden Financing Channels

(1) Customized financial products: Develop financial products tailored to strategic emerging industries, such as R&D loans for long R&D cycles, or innovative financial instruments such as securitization of scientific and technological achievements, to meet the unique capital needs of enterprises.

(2) Diversified forms of financing: In addition to traditional bank loans, we will actively promote equity financing, debt financing,intellectual property pledge financing, science and technology insurance, government guidance funds and other financing methods to form a multi-level capital market and ensure that enterprises can obtain stable and flexible financial support.

3.2 Strengthen Service Support and Linkage Market Transformation

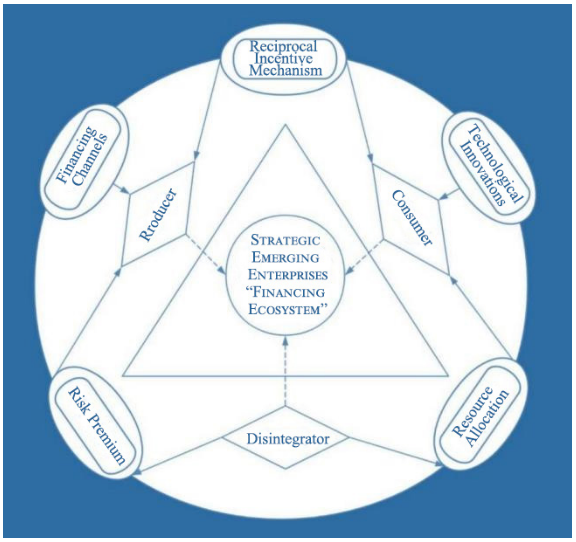
(1) Optimize policy support: The government should increase fiscal subsidies, tax breaks, innovation incentives and other policies to attract more private capital into strategic emerging industries,while strengthening intellectual property protection and creating a level playing field in the market.

(2) Promote the integration of industry and research: Deepen the reform of the property rights system of scientific and technological achievements, encourage researchers and innovation teams to share the benefits brought by the transformation of scientific and technological achievements, and stimulate the enthusiasm for innovation of talents and the vitality of enterprise innovation.

3.3 Optimize the Allocation of Resources and Improve Incentive Mechanisms

(1) Intelligent resource allocation: Use big data, cloud computing and artificial intelligence technologies to build a scientific and technological financial service platform, accurately identify and evaluate the innovation capabilities and needs of enterprises, and achieve efficient resource matching and optimal allocation.

(2) Establish a performance incentive mechanism: design an incentive mechanism guided by enterprise innovation results, encourage enterprises to continuously increase investment in research and development, accelerate the transformation of scientific and technological achievements, and form an innovation-driven growth model.



4 The Operating Mechanism of the "Financing Ecosystem" in the Context of Science and Technology Finance

The multi-entity coordination mechanism is the key to the effective operation of the "financing ecosystem". Enterprises,financial institutions, governments, research institutes and intermediary service agencies need to achieve complementary advantages and collaborative innovation by establishing long-term and stable cooperative relationships. For example, enterprises can provide technological innovation and market information, financial institutions can provide financial support and risk management services, the government can provide policy support and guidance funds, research institutes can provide technological research and development and personnel training, and intermediary service institutions can provide professional consulting and information services.

Risk control and benefit sharing mechanisms guarantee the sustainable development of the "financing ecosystem". Due to the high risk of strategic emerging enterprises, it is very important to

establish an effective risk control mechanism. Risk can be dispersed and reduced by setting up a risk compensation fund, introducing an insurance mechanism and establishing a risk early warning system. At the same time, the establishment of reasonable benefit-sharing mechanisms, such as equity incentives and revenue sharing, can encourage all entities to actively participate in and cooperate in the long term to achieve win-win results.

5 The Development Path of the "Financing Ecosystem" of Strategic Emerging Enterprises

Policy support and institutional innovation are crucial driving forces for the development of the "financing ecosystem". Governments should establish and refine relevant policies and regulations, such as tax incentives, fiscal subsidies, and intellectual property protection, to create a favorable institutional environment for building and advancing the financing ecosystem. Concurrently, financial innovation should be promoted through initiatives like developing technology banks, establishing tech insurance systems, and expanding intellectual property-backed financing, thereby providing diversified funding channels for strategic emerging enterprises.

Market forces and technological innovation serve as intrinsic drivers of the financing ecosystem's evolution. With the continuous advancement of fintech, market mechanisms play an increasingly prominent role in resource allocation. Financial institutions should be encouraged to create specialized financial products and services tailored to strategic emerging enterprises, including equity crowdfunding and supply chain finance. Leveraging cutting-edge technologies like big data analytics, artificial intelligence, and blockchain can significantly enhance financing efficiency, reduce capital costs, and strengthen risk management capabilities.

International collaboration and open sharing represent vital directions for the financing ecosystem's growth. In the globalized economy, strategic emerging enterprises must effectively utilize international resources. This can be achieved through establishing global fintech cooperation platforms, attracting foreign strategic investors, and participating in international standard-setting processes to foster the ecosystem's internationalization. Simultaneously, strengthening partnerships with leading global enterprises and research institutions will accelerate technological innovation and commercialization of research outcomes, ultimately enhancing the global competitiveness of China's strategic emerging industries.

6 Conclusions

Building and developing the "financing ecosystem" of strategic emerging enterprises is an important way to solve their financing problems and promote sustainable development. Through the coordination of multiple entities, the establishment of risk control and benefit sharing mechanisms, as well as the promotion of policy support, market drive, technological innovation and international cooperation, the "financing ecosystem" can provide all-round and multi-level financing support for strategic emerging enterprises. In the future, it is necessary to further improve the components and operation mechanism of the "financing ecosystem", optimize the policy environment, and strengthen international cooperation, so as to promote the rapid development of strategic emerging enterprises and the optimization and upgrading of industrial structure.

References

[1] Zhang Ming, Liu Zhanting. (2024). Technology Finance: Theoretical Context, Practical Status, and Research Prospects. New Finance, (8), 14-18+31.
[2] Liu Xun. (2024). Technology Finance, Profit Instability and Debt Default Risk of High-Tech Enterprises. Communication of Finance and Accounting, (16), 84-88.
[3] Zhuang Qinqin, Wang Ying, Wang Qijian. (2024). The Virtuous Cycle of "Technology-Industry-Finance": Theoretical Logic, Practical Challenges and Policy Recommendations. Economic Review, (8), 71-81.
[4] Li Wei. (2024). Theoretical Logic and Practical Path of Financial Resource Allocation Empowering New Quality Productive Forces. Friends of Accounting, (16), 16-20.
[5] Wang Qing, Chen Kang.(2024). Development Status, Problems and Countermeasures of China's Technology Finance: A Case Study of Sichuan Province. Southwest Finance, (7), 3-14.
[6] Wang Jian, Wang Wei. (2024). Technology Finance Policy, Industrial Structure Upgrading and Common Prosperity. Journal of Technical Economics & Management Research, (7), 127-132.
[7] Zhao Shufang, Wang Xiaotong. (2022). The Impact Effect of Patents on External Financing of Technology Enterprises: Empirical Analysis Based on Heterogeneity Perspective. Science and Technology Management Research, 42(24), 150-157.