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Research on Digital Transformation of Traditional Insurance Companies Empowered by Financial Technology——Taking S Insurance Group Company as an Example

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Abstract: *With the continuous development of information technology, financial technology (FinTech) has become an important driving force for the insurance industry's digital transformation. Traditional insurance companies face competitive pressure from emerging technology companies but also realize the need for digital transformation. This paper focuses on the connotation of the digital transformation of the insurance industry through the literature research method, combs the risks and challenges of the industry through the induction and summary method, studies the digital transformation practice of S Insurance Group by using the case analysis method, and analyzes the effectiveness and positive impact brought by the digital upgrading of S Insurance Group, which is helpful to provide experience reference for the innovation development, transformation, and upgrading of the traditional insurance industry.*

Keywords: *Financial technology; Insurance companies; Digital transformation*

1. Introduction

The scale of the global fintech market continues to expand and is expected to maintain rapid growth in the next few years. With the continuous innovation of technology and the expansion of application scenarios, the fintech industry will usher in more development opportunities and challenges. As an important means to improve management efficiency, digital transformation is generally considered to be an inevitable requirement for China's insurance industry to cope with the current difficulties and build new competitive advantages in the digital age. International experience shows that digital transformation can significantly optimize the cost structure of insurance companies. Buhler et al., through a survey of insurance companies in Germany, Switzerland, and Austria, found that with every 28% increase in the degree of automation of insurance companies, The average cost would be reduced by 14% [1]. From the perspective of the impact of science and technology on the insurance industry, the use of digital technologies such as big data, blockchain, and artificial intelligence can not only accurately market, price, control risks, and comprehensively reduce operating costs, but also quickly respond to escalating customer needs, provide high-quality, timely and differentiated services, and help insurance companies build core competitiveness. Through financial technology, insurance companies can achieve faster and more accurate data processing and risk assessment and improve the personalization of insurance products and service quality.

According to *iResearch*, science and technology investment in Chinese insurance institutions continues to increase from 2018 to 2023 (As shown in figure 1), and the scale of information technology investment in China's insurance industry in 2021 is about 41.4 billion yuan, accounting for about 0.92% of the industry's premium income, which has made a historic breakthrough, but compared with the global data level, the depth of insurance information technology investment in China still needs to be further strengthened. *Iresearch* estimates that China's insurance information technology investment scale will remain steady growth, is expected to reach 56.9 billion yuan in 2023 [2]. By the end of 2020, the automation rate of underwriting, underwriting and claims in China's insurance industry will reach 55.77%, 64.71% and 21.48%, respectively, and the average proportion of online customers and products will also reach 41.88% and 36.18%[3]

The development and application of financial technology promote the digital transformation of the insurance industry, which not only helps insurance institutions fully obtain valuable data information in

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various scenarios but also better overcome information asymmetry, promote cost reduction and efficiency, and improve customer experience. The digital transformation of insurance institutions in China generally started late, so it is urgent to strengthen the experience learning. As a leading integrated insurance group, S Insurance Group is recognized for its success in digital transformation. The study on the digital transformation of S Insurance Group has a strong reference significance for Chinese insurance enterprises to accelerate the formation of digital transformation paths in line with their own development, avoid transformation misunderstandings, and improve the core competitiveness of digital technology .

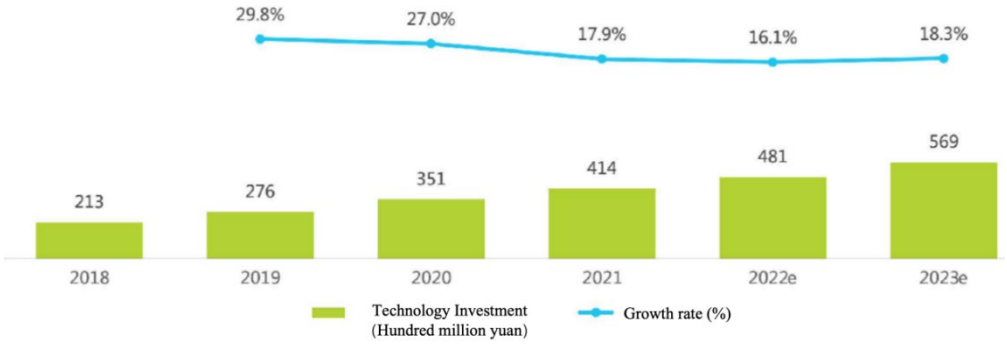

Figure 1: Technology Investment of Insurance Companies (2018-2023)

2. Basic concepts of fintech

Financial technology (FinTech) refers to a new form of financial service that uses scientific and technological means to innovate and upgrade traditional financial business. Advanced technologies such as big data, cloud computing, and artificial intelligence have improved the efficiency of financial businesses and optimized the user experience, bringing new opportunities and challenges to the development of the financial industry. There are many excellent fintech companies in the world, such as mobile payment platforms such as Alipay and wechat Pay, online lending platforms such as Lufax, as well as many intelligent investment advisory and insurtech companies. These enterprises have injected new vitality into the traditional financial industry through technological innovation and application scenario expansion[4].

2.1 Development history of fintech

The development of fintech can be traced back to the 1990s when the popularity of the Internet provided a new development platform for the financial industry. With the continuous progress of technology and the continuous enrichment of application scenarios, the fintech industry has experienced the following stages of development. First, the electronic stage of finance, mainly using computer and other technologies to achieve the electronic and automation of financial business, improve the efficiency of business processing. The second is the Internet finance stage; through the Internet and mobile Internet, the financial business is combined with the Internet to provide users with more convenient and diversified financial services. Third, in the financial technology stage, the use of big data, artificial intelligence, and other technologies, the traditional financial business in-depth innovation and transformation, improve the intelligence and personalized level of financial services [5].

2.2 Main technologies and application scenarios of fintech

The main technologies of fintech include big data, cloud computing, artificial intelligence, blockchain and so on. The application of these technologies provides the financial industry with strong data processing capabilities, flexible IT architecture, intelligent risk assessment and efficient transaction processing support. The application scenarios of fintech are very wide, including payment, investment and financial management, insurance, loan, crowdfunding, and so on. For example, mobile payment applications provide users with convenient and fast payment services through mobile phones and other terminal devices; Intelligent investment advisory applications based on big data and artificial intelligence technology to provide users with personalized investment and financial advice[6]; Blockchain technology can be applied to cross-border payments, supply chain financing and other fields to improve the transparency and security of transactions. In the future, fintech will continue to

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develop and innovate at a rapid pace. On the one hand, the continuous evolution of technology and the continuous expansion of application scenarios will bring more opportunities and challenges to the financial industry; On the other hand, the gradual improvement of regulatory policies will promote the healthy and orderly development of the fintech industry. It is expected that in the next few years, the application of artificial intelligence, blockchain, and other technologies in the financial field will be more extensive and in-depth, while the fintech industry will also pay more attention to data security and privacy protection[7].(As shown in figure 2)

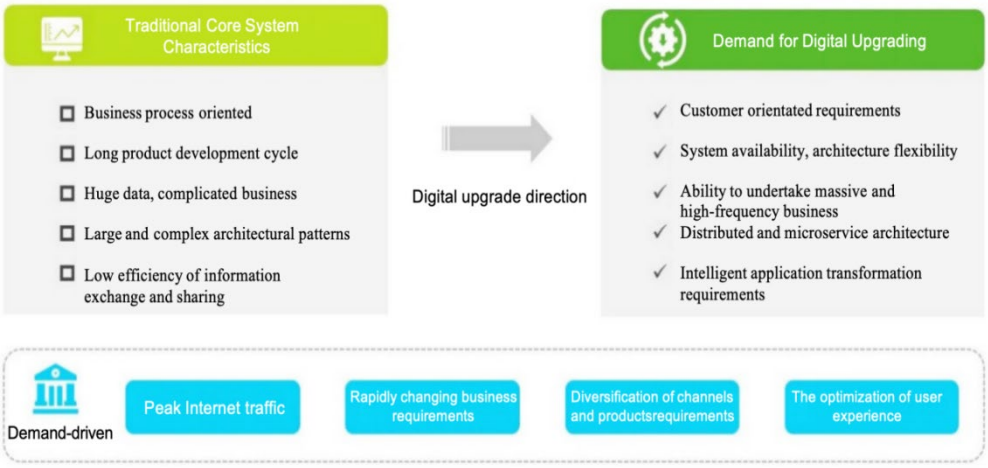

Figure 2: Digital transformation direction of insurance industry

3. Financial technology enables risks and challenges in the digital transformation of traditional insurance companies

3.1 Data security risks

In digital transformation, traditional insurance companies need to deal with a large amount of customer data, including personal information, transaction information, etc., and the security and privacy protection of these data is crucial. Once the data is leaked or improperly used, it will not only harm the interests of customers, but also have a serious impact on the company's reputation and business.

3.2 Technical implementation risks

In the process of digital transformation, traditional insurance companies need to introduce and apply advanced technological means, such as artificial intelligence, blockchain, cloud computing, etc. However, various problems may occur during the implementation and operation of the technology, such as system failures, cyber attacks, etc., which may affect the normal operation and service quality of insurance companies. Moreover, some traditional insurance companies have a low level of awareness and application of financial technology, lack sufficient investment and research and development capabilities, and cannot fully use financial technology to improve business efficiency and service quality.

3.3 Compliance Risk

With the rapid development of fintech, relevant laws, regulations, and regulatory policies may not keep up with the times, resulting in traditional insurance companies facing compliance risks in the process of digital transformation. For example, regulatory requirements for some online insurance businesses may be unclear, leading companies to face compliance issues[8].

3.4 Market competition risk

The rise of financial technology has made the insurance industry face a new competitive landscape. New insurtech companies are often able to provide more convenient and flexible insurance services, attracting a large number of customers. At the same time, the corporate culture of traditional insurance

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companies may be conservative and rigid, which makes it difficult to adapt to the changes brought by digital transformation and lack of innovation and change consciousness. In the process of digital transformation, traditional insurance companies need to constantly innovate and improve service quality to cope with market competition.

3.5 Talent shortage risk

The rise of financial technology has put forward new requirements for talent needs in the insurance industry. Traditional insurance companies need hybrid talent with technical background and business knowledge to drive digital transformation. However, the supply of such talent may be insufficient, leading to the risk of talent shortage for traditional insurance companies in the process of digital transformation.

4. Suggestions on the digital transformation of traditional insurance companies enabled by Fintech -- take S Insurance Group as an example

4.1 Basic information of S Insurance Group

S Insurance Group is a leading comprehensive insurance company in the domestic insurance industry. The company focuses on the main insurance business, accurately grasps the industry trend, and has a forward-looking layout in the health, pension and other new business sectors. With its transformation strategy and first-class insurance management ability, it has been selected as the world's top 500 enterprises for ten consecutive years. On the road to digital transformation of the traditional insurance industry, S Insurance Group is undoubtedly one of the pioneers. As early as 2015, the company's president showed the recognition of the digital upgrade of the enterprise. The digital transformation of S Insurance Group officially began in 2017, and its digital transformation strategy kicked off the prelude of digital transformation, making the first effort in the application of digital products, and releasing the first intelligent insurance consultant in the insurance industry. In 2018, S Insurance Group further launched the digital transformation 2.0 strategy, taking digitalization as the key word. During this period, S Insurance Group realized the unification of all portals by creating intelligent apps integrating various C-terminal applications. So far, the digital application matrix of S Insurance Group has been gradually improved. The strategic cooperative relations with various scientific and technological enterprises and universities have been continuously promoted. The scientific and technological ecological cooperation circle has been initially formed to provide the innovation source power for T company.

S Insurance Group has outstanding characteristics of digital transformation, adheres to the principle of deep integration of science and technology and business in strategy formulation and technology research and development, constantly optimizes the organizational system mechanism to form a stable underlying support for transformation, establishes a comprehensive and systematic digital technology development, application and export system, and strives to fully integrate the digital-driven concept into the corporate gene. S Insurance Group also actively promotes the construction of digital ecology and promotes the digital development of the entire industry. In general, S Insurance Group has formed a unique and effective digital transformation system with digital technology as the main driving force and the realization of the group's overall strategic goals as the ultimate goal.

4.2 Suggestions on the digital transformation of traditional insurance companies enabled by fintech

4.2.1 Build a professional team with science and technology insurance attributes

In the digital transformation of traditional insurance companies, continuous skills training and knowledge updating of employees are needed to ensure that they can keep up with the pace of digital transformation. First, strengthen the construction and allocation of interdisciplinary talents. According to the needs of the development of science and technology insurance, select and train managers with comprehensive knowledge structure such as science and technology industry background, financial expertise, and risk management of science and technology enterprises; Strengthen the construction of professional talents such as marketing promotion, two-core, actuarial and so on. The second is to set up specialized science and technology insurance teams in different fields. Strengthen industry research in the field of science and technology, gradually improve the awareness of risks of science and technology enterprises, and establish exclusive insurance teams such as intelligent manufacturing, digital core,

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biomedicine, new materials, and new energy. The third is to establish a basic law that conforms to the characteristics of science and technology insurance. On the basis of responding to the market mechanism and outstanding performance orientation, the flexible design is made by comprehensively considering the characteristics of science and technology insurance and different science and technology industries, taking into account the exhibition mode, team structure and fission, etc., and increasing the elasticity coefficient and incentive attribute of the assessment. For S Company, establishing a digital transformation team is one of the important measures for S Insurance Group companies to promote digital transformation. The team is responsible for developing digital transformation strategies, driving fintech adoption and innovative project implementation. By focusing on promoting digital transformation, S Insurance Group can better cope with the changes in market competition and customer demand. It also needs to introduce financial technology talents and provide strong talent support for digital transformation by recruiting talents with financial technology backgrounds. These talents not only possess technical competence, but also have a deep understanding of the insurance business and the market, and can provide comprehensive solutions for the digital transformation of the company

4.2.2 Provide comprehensive insurance solutions through the "Product +" service

First, actively provide risk reduction services. In the future business process, science and technology insurance should not only sell insurance products and provide diversified risk services, but also take advantage of the special business model of insurance to proactively and effectively reduce various risks in the science and technology industry or enterprises. Therefore, science and technology insurance businesses can try to adopt a new operation model, risk reduction service, as a key part of the comprehensive service plan, that is, to achieve the "policy first, disaster reduction follow-up" operation model. Second, explore a win-win model for technology and finance. Insurance companies can try to explore the "insurance investment linkage" in the field of science and technology venture capital, play the risk protection function with "insurance", share the growth dividend of science and technology enterprises with "investment", and achieve joint construction, sharing and sharing of resources.

4.2.3 Establish a multi-dimensional and hierarchical science and technology insurance product system

Rapid data analysis and processing can be achieved through the introduction of cloud computing technology to handle large amounts of data. In addition, cloud computing can also help companies store and back up data more efficiently. First, improve the system of science and technology insurance products around the value chain of science and technology enterprises. Insurance companies should gradually develop insurance products involving costs, liabilities, personnel, intellectual property rights, etc., and provide science and technology enterprises with relatively complete life-cycle insurance products that meet the characteristics of science and technology enterprises. Second, continue to build key and complementary technology insurance products. The third is to develop standardized service solutions for small and medium-sized science and technology enterprises. With small and medium-sized science and technology enterprises as the applicable object, we will solve the common problems of intellectual property protection and product liability that enterprises generally face in the process of operation and development and support the growth of small and medium-sized science and technology enterprises. The fourth is to provide customized insurance solutions for key technology enterprises. For example, working with technology companies is one of the important ways for S Insurance Group companies to accelerate their digital transformation with external forces. By partnering with fintech companies and other technology enterprises, S Insurance Group companies have access to advanced technologies and solutions to accelerate the digital transformation process. At the same time, cooperation can also help companies expand business areas and market scope and enhance competitiveness.

5. Conclusion

In today's rapidly evolving technology era, the digital transformation of traditional insurance companies has become an important way to improve efficiency and competitiveness. Traditional insurance companies must strengthen investment in fintech research and development and application, improve data security and risk management, improve regulatory policies and compliance mechanisms, strengthen talent reserve and training, promote corporate culture innovation and change, and enhance market competitiveness and customer service levels. At the same time, it is also necessary to work with all partners to achieve a win-win situation.

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