Domestic Research Status and Prospect of Internet Insurance Products in China

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Abstract

This essay is based on 29 domestic journal articles selected from CNKI and focuses on Internet insurance. Statistics show that the number of domestic literatures in this field has shown an increasing trend in recent years, and the research methods are relatively concentrated on qualitative analysis. Most of the literature explores the characteristics of Internet insurance; the business model, principles and implementation methods of Internet insurance companies; industry operations, existing problems and their causes; industry development strategies, suggestions. Relatively few literatures discuss upon other topics. Future research should seek breakthroughs in three aspects: first, focusing on industry data and model research; second, promoting research method diversification; third, broadening the research on Internet insurance subdivisions, and designing specific Internet insurance development programs.

Keywords: Internet insurance; Domestic research; Current status; Prospect
1. Introduction

In China's contemporary economy, the application of the Internet has infiltrated into all walks of life, and the financial industry has continued to innovate and made great strides via Internet, developing rapidly. In the “13th Five-Year Plan for the Development of China's Insurance Industry” issued in 2016, it is proposed that the development of China's insurance industry should actively implement the "Internet Plus" action. Insurance is used as a risk management and risk transfer mechanism. Internet insurance sprout in response to the need of preventing and lowering various risks that users may face in production and life, and making better use of Internet technologies such as big data and cloud computing for deep design and precise marketing of insurance product. For the entire insurance industry, Internet insurance not only changed the structure of sales channels, innovated the scene products and services, but also changed the pricing model (Wang Jing, 2017), meeting the customization and individual needs of consumers (Li Yan Qing and Wan Peng, 2014); facilitated the new growth pole of the insurance business, spawned new changes in the business model, and reshaped the pattern of the financial market (He Dexu and Dong Jie, 2015). The Internet has promoted the efficiency of insurance companies (Liu Yuanxiang, 2015). Internet insurance has become one of the important driving forces of increasing premiums (He Lixin and Chi Yu, 2016). Some scholars also mentioned that the integration of the Internet and various industries has become the trend of the times (Ge Lizhang; 2016). With the increase of consumers’ risk awareness and expansion of financial knowledge, the purchase of insurance can be initiated by consumers (Luo Yanjun, 2013).

Even though Internet finance is prospering, and Internet insurance is strongly supported by national policies, it only has a short history so that there is room for laws and regulations to improve, insurance to incorporate Internet comprehensively, and product development talents to grow. Therefore, while the Internet puts insurance companies at a advantage, the key to the survival and development of Internet insurance companies still lies in how the government conduct strong and effective policy guidance and how companies prevent and control risk. After systematically sorting out relevant literature on Internet insurance, this essay attempts to show the theoretical research results of Internet insurance in a clear manner and point out the shortcomings in the current research and propose future research direction.

2. Object definition, literature collection and sample characteristics

2.1 Object definition

On July 26, 2015, the China Insurance Regulatory Commission issued “Interim Measures for the Supervision of Internet Insurance Business” (herein-
after referred to as the “Interim Measures”), which defines Internet insurance. The Internet insurance business refers to insurance institutions that rely on technology including the Internet and mobile communications to provide insurance services through contracting with self-operated network platform, third-party network platform and more. At present, there is no unified conclusion on the definition of Internet insurance products in the academic circles. Broadly speaking, the insurance products sold on the Internet are included in Internet insurance products. Ge Lizhang (2016) pointed out that the insurance products sold on the Internet are mainly traditional insurance products. In a narrow sense, Internet insurance refers to insurance products with Internet characteristics which are developed via Internet scenarios or Internet technologies, such as customized insurance products differentiated by Internet scenes. Chi Yu, Chen Yaonan (2017) pointed out in the research that Internet insurance is a financial industry in which the insurance industry relies on network technology and mobile communication technology to carry out multi-dimensional innovation. The innovations include marketing innovation, channel innovation, institutional innovation and product innovation.

2.2 Literature collection

After the source of the literature is set in CNKI, the scope of the literature is defined in journals from CSSCI (including the extended version). When searching, “Internet Insurance” is chosen as the search term, and by means of quick browsing and screening, only the documents in which “Internet Insurance Products” is the research object are retained. At the same time, the publication time of the literature and journals is limited to January 1, 2016 to July 31, 2019 and 29 articles come out.

2.3 Sample characteristics

2.3.1 Time distribution

As shown in Figure 1, research literature on Internet insurance has only appeared since 2013. There are not many relevant literatures published each year in the academic world. Only 2 articles were published in 2013, 3 in 2014, and 5 in 2015 and 5 in 2016. The highest number in one year was 7 in 2017, and then the number of articles published in a year fell to 4 and 3 in 2018 and 2019 respectively (as of July 2019, there may still be few documents not yet included).

2.3.2 Research method

In this paper, the research methods (including the collecting and using of data) are classified into eight types: qualitative analysis, literature research, case analysis, statistical analysis, in-depth interview, experimentation, questionnaires and other research methods. As shown in Figure 2, as many as 19 papers are concluded in qualitative analysis, a small number of papers use literature research, case analysis and statistical analysis. There are many literatures using statistical analysis, followed by that using literature analysis; very few scholars use in-depth interview research methods. No scholars have adopted experimentation and questionnaires; other scholars have carried out field research.
3. **Topic induction and summary**

Current domestic research direction of Internet insurance mainly include: the characteristics, operating mode, development, suggestions on development and solutions.
3.1 Characteristics of Internet insurance

The in-depth development of network technology and the improvement of people's insurance awareness have promoted the development of Internet insurance. The characteristics of Internet insurance can be explained mainly from aspects of products and development.

From a product perspective, Internet insurance has the characteristics of low premium, simple terms, and subdivided insurance. Peng Hongfeng and Xiao Zuyu (2016) analyzed that Internet insurance uses network technology to reduce the cost of information retrieval and manage policyholders. The cost saved can be transferred to consumers by reducing the price of products. The fierce market competition stimulates insurance companies to design customized and differentiated Internet insurance products from the demand side.

From a development perspective, Internet insurance has experienced different development stages from germination to rapid development, and at the same time, it has also formed different development characteristics by virtue of the advantages of the Internet. Jia Linqing (2014) believes that Internet insurance mainly experienced two stages, primary development and advanced development. The main feature of the primary stage is that the Internet is only used as a channel to sell electronic insurance policies. In the advanced stage, the scope of application is determined as the Internet economy, and the Internet is infiltrated into all aspects of insurance management. Based on products and services, Luo Yanjun (2013) divides the development of Internet insurance into four stages. Among them, the main content of the release stage is that insurance companies, insurance intermediaries and other organizations establish websites for product introduction, business consultation, market research and other activities; during the exploration stage, it mainly uses the Internet as a new channel to gain more customers; during the service stage, it puts businesses online and invents new system, highlighting the service quality; product and institutional innovation stage mainly includes innovating on products, services and organizational forms, such as the establishing Internet insurance companies.

3.2 Internet insurance business model

The interim measures introduced in 2015 stipulate that the main body of Internet insurance includes insurance agency companies, insurance brokerage companies, insurance companies' self-operated online sales platforms and third-party network platforms that cooperate with insurance institutions. After analysis, Guo Jinlong (2015) believes that the interim measures encourage insurance institutions to facilitate the establishment of self-operated insurance platforms, forming cross-border cooperation between insurance institutions and other platforms, promoting insurance products and services innovation, and improving supervision of the insurance industry. After summarizing the development history of Internet insurance, He Dexu and Dong Jie (2015) pointed out that to a large extent, Internet insurance operation is realized due to the establishment a self-operated official website and a professional Internet insurance company via a third-party e-commerce platform or insurance institution.
Zhang Xiaoying (2013) pointed out that the consumer consumption view and insurance awareness are growing mature. The traditional insurance sales model has problems such as unsatisfactory service quality and product technology innovation lag, proposing that insurance network sales should adopt diversified sales model. Li Qiong, Liu Qing and Wu Xinggang (2015) analyzed the impact of the Internet on insurance channels and concluded that the impact of the Internet on traditional insurance sales channels is realized mainly by substitution effects. Liu Yuanxiang (2015) empirically analyzed and concluded that the Internet has promoted the operating efficiency of insurance companies. The cost and profit efficiency of insurance companies are highly correlated with Internet premium income and market share and life insurance companies run more efficient than property insurance companies. Yang Weiping, Zhou Mi, Cheng Meng (2016) analyzed and concluded that in the context of Internet finance, the evaluation of the performance of insurance companies should incorporate the assessment of Internet operations.

3.3 Internet insurance operations

Since 2011, the China Insurance Regulatory Commission has successively promulgated the “Measures for the Supervision of Insurance Agents and Brokerage Companies' Internet Insurance Businesses”, “Implementation Plan for the Special Rectification of Internet Insurance Risks” and other policies. Various ministries and governments have also actively push forward relevant policies to promote Internet insurance. For example, in 2018, the Hong Kong Insurance Industry Regulatory Authority issued the first virtual insurance license, namely the Internet insurance license, for Baotai Life Insurance, encouraging insurance industry to use technology and the Internet. In recent years, from the data released by the China Banking Regulatory Commission and the China Insurance Association, while it has shown explosive growth in 2015, the premium scale and penetration rate of Internet insurance have continued to decline, and the negative growth appeared for the first time in 2017. Premium income decreased by 21.83% year-on-year, mainly because the China Insurance Regulatory Commission tightened the supervision of mid-term and short-term wealth management products and commercial vehicle fees has experienced a reform in regard to Internet auto insurance.

However, in general, the premium income scale and penetration rate of Internet insurance has shown a upward trend. As of 2018, Internet insurance premium income has reached 19.05 million yuan, a approximate 5853% increase compared with the Internet premium income scale of 320,000 yuan in 2011, and the penetration rate has increased by nearly 2223%. Apparently, Internet insurance has achieved certain development under the complex environment of the preferential policies and support for Internet insurance from governments, the improvement of consumer insurance awareness and the explosive development of Internet insurance companies interacting with each other.
In the first half of 2018, according to the data from the “Internet Insurance Industry Research Report of 2018”, we can get the proportion and development trend of property insurance and life insurance in Internet insurance since 2012. It can be seen from the figure that since 2012, the proportion of property insurance has slumped to 28.30%, the proportion of personal insurance has far exceeded property insurance and personal insurance accounts for the vast majority of Internet insurance premium income.

As is shown in the figure, the structure of Internet insurance premium income has tended to be stable in the past two years, indicating that Internet insurance has encountered bottleneck problem.
3.4 Existing problems in Internet insurance

3.4.1 Unmatched corresponding laws and regulations for internet insurance

In terms of the current law for Internet insurance, Li Min (2019) believes that network technology is widely used in the insurance industry, as a result, the traditional insurance law does not apply to Internet insurance anymore and cannot effectively regulate Internet insurance related behavior. That’s how misleading the public while marketing insurance grow out of control, which calls us to build a new standard for Internet insurance to fulfill traditional legal obligations. For Internet insurance consumers, Li Wenrui (2017) and Xue Ranqi (2019) believe that the imperfect relevant laws and regulations of Internet insurance results in the unclear rights system to protect Internet insurance consumers.

3.4.2 Consumers’ distrust of Internet insurance

Internet insurance combines not only the advantages of traditional insurance and the Internet, but also the shortcomings of both, namely risks. As Jia Linqing and Jia Chenge (2014) proposed, risks that Internet insurance face are Internet risks adding to traditional insurance risks. Insurance companies require consumers to provide information that is extremely private, and the Internet is the fastest medium for information dissemination. Therefore, consumers' distrust of Internet in terms of personal information privacy will be passed to Internet insurance. Li Hua (2018) believes that in the process of purchasing Internet insurance, personal information is easy to leak, and data is difficult to protect, which is not conducive to safeguarding consumers’ rights and interests, and has hurt consumers' willingness to purchase Internet insurance products.

3.4.3 Internet-based insurance isn’t fully developed

Regarding the status quo of Internet marketing of insurance, Wang He (2016) proposed that the current "Internet plus insurance" is mostly at the stage where it is used as a channel and a tool for marketing positioning. Regarding the status quo of insurance Internet products, Liu Dongyu pointed out in an interview with Zhang Xiaoying that the products that sell online are mainly insurance and simple life insurance products, which require diversification. Regarding the status quo of Internet insurance product innovation, Wang Jing (2017) believes that the current Internet insurance product innovation is more using Internet as a marketing tool, rather than using network technology as an innovation tool. But Internet insurance products variety and quality cannot meet the diverse consumer demand. All contemporary industries have been involved in the Internet wave of the new era, and insurance is not an exception as an industry that is dependent on other risky industries. Therefore, Zhang Wei believes that although Internet insurance is considered to be Internet sales in a narrow sense, the Internet will certainly bring subversive changes to the insurance industry. At that time, the whole picture of Internet insurance will be accepted and used by people.
3.5 Main reasons for the existing problems in Internet insurance

Nowadays, the development of Internet insurance industry lacks stamina. When encountered the development bottleneck, the Internet insurance market has not fully displayed its potential. What are the reasons? This has aroused widespread concern in the insurance industry, which mainly analyzed and discussed upon the following three aspects:

3.5.1 Absence of Internet laws and regulation

The combination of insurance and the Internet is a product of the development of the Internet and is an emerging industry of the times. Compared with traditional insurance, Internet insurance has encountered new risks along the way, such as information data security and product pricing. Faced with new risks, although the Banking Regulatory Commission has come up with regulatory norms of the Internet insurance industry and successively issued the “Implementation Plan for the Special Rectification of Internet Insurance Risks” in 2016 and the “2018 Inspection Plan of on-site Insurance Supervision” in 2018, Xue Ranqi (2019) believes that while China attaches importance to Internet insurance and its supervision becomes stricter, the existing laws and regulations are not effective enough. Those laws and regulations only take principled provisions and low-level supervision into consideration. For consumers of Internet insurance, the effectiveness of their protection remains unknown. Internet insurance laws and regulations should be based on the essential characteristics of insurance, adapt to the new environment of the Internet. Targeted guiding policies, regulatory programs, and all-round legal regulations are required to fulfill industry supervision.

3.5.2 Potential risks facing network technology and information safety

In terms of network technology risks, He Dexu and Dong Jie (2015) believe that the development of Internet insurance is accompanied by network technology risks. Therefore, if the Internet insurance industry is to develop healthily and safely, guaranteed Internet security is essential. Because of the openness of the Internet, there comes vulnerabilities. For example, operating system is crashed due to Internet virus and banking network becomes the target of hackers, thus being maliciously destroyed to defraud and steal funds.

In terms of information security risks, Zhang Xiaoying (2013) has already interviewed Liu Dongyu and concluded that the information security of the Internet affects the sales of Internet insurance. In 2015, information vulnerabilities were detected in more than 20 insurance institutions' network platforms, resulting in the leakage of consumer private information, which directly caused crisis of confidence in Internet insurance industry. In fact, the China Insurance Industry Association has already issued the “2018 Internet Life Insurance Market Operation Report” which states that customer information privacy constitutes one of the challenges facing Internet insurance, the Banking Regulatory Commission explicitly requires financial institutions to improve the customer protection system, and relevant government agencies have also issued the “Insurance Industry
E-commerce Law” and other bills. However, supervision of third-party platforms is poorly executed. Online payment and the filling of necessary policy information are all important personal information and data of consumers. Therefore, the leakage of personal information data has become one of the most worried risks for consumers. This requires insurers to devote more to the investment and maintenance of the network platform and control the risk of personal information data leakage during acquisition, transmission, storage and processing.

3.5.3 The disjoint between Internet insurance reform and consumer demand

Luo Yanjun (2013) believes that the development of big data and technology has expanded the scope of insurable risks. In the Internet scenarios, Internet users have new insurable benefits, resulting in new insurance needs, such as freight insurance and other insurance products that are tailored to the Internet scenarios, which directly leads to huge changes in Internet insurance. Till now, insurance industry has accumulated a wealth of underwriting and claims data, but the data only covers few types of data and details which makes it difficult to keep up with the personalized needs of current consumers. As many scholars such as Gao Lizhi and Ge Lizhang (2016) have proposed, the current Internet insurance is only putting traditional insurance products online, and a high-level homogenization exists in Internet insurance products.

3.6 Development strategies of Internet insurance

In response to the above problems, the scholars' suggestions mainly include the following three aspects:

3.6.1 Improve the regulation of the industry

Scholars like Luo Yanjun and He Dexu have proposed to first clarify the concept of open and inclusive regulation. Internet insurance is a brand new derivative of the insurance market in the Internet era. It is not only an all-round penetration of the insurance industry's business philosophy and operations management, but also an Internet transformation of traditional insurance products with huge innovation potential. In terms of Internet insurance intermediaries, Limin（2019）pointed out that it is the inflexible insurance rates and provisions that limit its development. Therefore, it is necessary to create a flexible development environment for insurance companies, encouraging them to try new channels, new products and new services through new Internet technologies, further achieving qualitative leap in the development of Internet insurance. Luo Yanjun also emphasized the general idea of “opening the front-end and managing the back-end” in order to improve regulation: Regulators must sort out current regulatory requirements and division of responsibilities in light of the characteristics of Internet insurance, in order to develop special regulatory guidelines covering institutions, regions, executives, products, services and internal controls, etc. They must also eliminate unsuitable regulations and tighten
control over information and financial security, ensuring safe and stable market operations. In terms of the regulatory implementation, Zhang Xiaodan, Fu Fuqiang and other scholars from Central State Organs Youth Cadre Research Group(2016) also proposed to introduce the “Internet + Action” plan to expand the business scope of professional Internet insurance companies, as well as clarify business rules and explore flexible regulation.

3.6.2 Form a bottom-line thinking of risk prevention and control various risks of Internet insurance
In addition to the network technology risks and information security risks mentioned above, Internet insurance also faces many risks, such as cross-industry risks and risks from multinational insurance groups. Dong Jie (2015) and other scholars put emphasis on risk management in the development of Internet insurance. Internet insurance companies and regulators should strengthen the risk early warning mechanism, raise awareness of risk prevention, and find a balance between risk prevention and long-term development, ensuring steady industry operations. Jia Linqing and Jia Chenge (2014) put forward practical proposals to prevent risks, suggesting establish an industry access system for Internet insurance and misleading prevention mechanism for sales of Internet insurance products.

3.6.3 Pay attention to the changes in consumer consumption trends, focus on product and service innovation
According to the research conducted by Allianz Insurance in 2015, changes in customer demand will have implications for the operation of insurance companies. Therefore, Wang Jing (2017) proposed that Internet insurance companies be customer-oriented, claiming that the integration of insurance services and life and production will become the development trend of the industry. With more and more homogeneous products on the market, scholars suggest Internet insurance companies focus on products and service innovation. On the one hand, Internet insurance companies should base themselves on diversified needs and differentiated scenarios, segment consumer groups through big data and other means to better meet consumer demand, and develop customized Internet insurance products; In the face of serious homogenization of Internet insurance products, they also have to give priority to service and marketing innovation in order to stand out from the competition.

3.7 Other researches
Domestic scholars also conduct research from other angles. Xu Xian (2017) explored the use of blockchain in insurance marketing, supervision and financial settlement, and believed that blockchain can alleviate the information asymmetry in the insurance industry, solve the drawbacks of insurance credit and security, and reduce insurance disputes, improve the risk management within insurance companies. Zhou Bin, Zhu Guibin, Mao Deyong, Pioneer Pioneer(2017) believe that the blockchain can share information in the insurance industry with its
complete, distributed, and continuous ledger database that cannot be tampered and open source, transparent technology. Database that is impossible to tamper and trace can help insurance companies create a safer trading environment. The blockchain database can reduce the dependence of insurance companies on third-party platforms when obtaining customer information. Combining blockchain with big data and other technologies to establish an automated management system can improve insurance intelligence. Through a comparative analysis of Taiwan and the mainland's insurance regulatory legal system, Chi Yu, Chen Yaonan (2017) believes that Taiwan is doing a better job in terms of limitation of Internet insurance business scope, insurance and underwriting notification mechanism, moral hazard prevention and more, which sets the example for the mainland. But in terms of the setting of the access qualification for Internet insurance, the limitation of the relationship between the insured and the applicant, and the solution to the third-party network platform, Taiwan can learn from the mainland.

4. Future research prospect

The existing research mainly analyzes the situation of China’s Internet insurance industry after 2000, points out the problems in government supervision, business operation, market development and more and puts forward corresponding suggestions. Judging from the existing research, the academic community generally believes that there is no doubt about the importance of Internet insurance in the insurance industry and the need for Internet insurance to grow. Its development and popularization will greatly raise premium, deepen the awareness of insurance for all, and promote the integrated development of financial markets. However, the current relevant research is still insufficient, which is shown as follows: First, qualitative research outnumbers quantitative research. While 19 of the 29 papers use qualitative research, only 6 papers use statistical analysis. In general, the current academic research on Internet insurance lacks data and theoretical models. The second is the lack of diversified theoretical research. In the context of the Internet, the opportunities and challenges facing Internet insurance over traditional insurance are changing with each passing day. The consumer psychology and behavior when buying online and offline also vary. The papers on consumer decision-making behavior are mostly based on economics. No papers adopt the perspective of psychology and other disciplines to study and analyze consumer behavior, neither do they use various data model as their research method. Third, there is a lack of research on the subdivision field of Internet insurance. Internet insurance, like traditional insurance, can be subdivided into life insurance, property insurance and more with distinctive risk status, pricing methods and exhibition methods. In addition, the Internet insurance industry also has different entities, such as insurance companies, insurance intermediaries and regulators, which play contrasting roles in the development of Internet insurance practice, and whose behavior bring changes to the insurance industry. Conducting differentiated research on the types and objects of Internet
insurance will help to find the source that hinders its development and promote the all-round progress of Internet insurance. Since Internet insurance has only developed in short ten to twenty years, the academic community only makes research and propose suggestions on the overall operation status, risk status and legal system of the Internet insurance industry and has not discussed and analyzed the subdivision or objects of Internet insurance.

The insurance industry looks promising in China. With the help of Internet technologies such as big data and blockchain, Internet insurance will become the main force in the industry. In order to get China's Internet insurance involved in technological innovation, future research should focus on the status quo of the Internet insurance industry, closely combine relevant theories, and analyze the problems arising from the development in a multi-faceted and in-depth manner. Future research should also keep abreast of the times and comes up with a systematic and comprehensive development plan for Internet insurance with strong guidance, thus promoting the rapid development of Internet insurance and financial innovation.

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