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# An Analysis of the Development of Pet Insurance Market in China

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### Abstract

Pets are becoming an increasingly significant part of metropolitan life. Pet owners see their pets as close family members, and the primary demand for pet raising has shifted to emotional companionship, giving pet raising more emotional significance in China. The risk of accidents that suddenly can sometimes occur in pets, in the form of pets can get sick, injured and even die. Thus, most pet owners will seek veterinary care for their pets at some stage. However, the high medical costs of pets will increase their health costs as well as pet owners' economic burden. Pet insurance is now available to help pet owners manage their financial risks. Nevertheless, the penetration rate of pet insurance is very slow and less than 1%. As a result, this study uses a secondary data to summarize the overall image of the pet insurance industry as seen through the eyes of pet insurance companies. This research uncovers a wealth of important information on pet insurance, including its history, the current state of pet insurance providers, pet insurance products, pet insurance policy terms, and the pet insurance industry. On the one hand, this study summarized the existing problems of Chinese pet insurance market and these outcomes contribute to boost the existing literature on pet insurance. On the other hand, this research will help scholars and pet insurance providers gain a more comprehensive understanding of the Chinese pet insurance market. Keywords: Pet Insurance, Pet Insurance Providers, China

### Introduction

Humans first began training and caring for animals thousands of years ago (Han, 2021), therefore pets have long been considered human companions and friends. Nowadays, individuals have fewer extended family networks and smaller family sizes, and more people

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live alone in cities than in the past (Sundell, 2018). More and more societies own dogs, which provide emotional support to people (Song, 2020). Numerous studies have shown that pet companionship improves pet owners' physical and mental health (Allen et al., 2000; Brown & Rhodes, 2006; Hoffman et al., 2018; Smith et al., 2018) and promotes life satisfaction (Hardie et al., 2023). Pets are becoming an increasingly significant part of city life (Sundell, 2018; Zhang, 2021).

In 2023, Chinese pet owners (dogs and cats) in cities and towns totalled 75.10 million, a 6.6% increase over 2022, with 35.21 million dog owners and 39.89 million cat owners (Petdata, 2024). Raising pets has become a popular lifestyle in China, and pets typically provide emotional companionship to their owners (Iresearch, 2023) and alleviate boredom (Sukono et al., 2023). With the rise in popularity of pet healthcare, pet owners have paid close attention to pet food, supplies, and medical treatment. According to the pet medical report for 2022, each pet spends approximately 1300 yuan (180.6\$) per year in hospitals or clinics, with the average medical expense reaching 1475.4 yuan (204.9\$) per year in first-tier cities. Some pet owners struggle to afford veterinarian expenses (Williams et al., 2020). Furthermore, a survey revealed that the high expense of pet medical care is the most distressing issue for pet owners in first- and second-tier cities (Petdata, 2024). In Hungary, the vast majority of veterinarians contend that the financial expenses of available treatments influence pet owners' decisions to a large or medium extent (Révész & Ozsvári, 2022). The high medical expense of pets will increase their health expenses while also increasing the economic burden on pet owners.

Veterinarians agree that euthanasia of pets in veterinary emergency treatment is frequently the result of the pet owner's inability to fund life-saving medical expenses (Boller et al., 2020). An insurance scheme can help to reduce dangers to pets (Sukono et al., 2023). Pet insurance is a financial instrument intended to alleviate the economic strain of unexpected out-of-pocket veterinary bills and prevent pet mortality (Anderson et al., 2021). As a result, pet insurance has become the most intriguing developing market for Chinese pet owners (Apa et al., 2023). In fact, pet insurance has been around in China since 2004, but the adoption of pet insurance has been very limited to become accepted, unlike other developed countries such as Canada, the United Kingdom, and Sweden.

Prior research primarily conducted descriptive analyses of the state of development and enumerated some of the issues that now plague pet insurance products on the market. For instance, while many studies concentrate on pet insurance products (Cai et al., 2022; Ran, 2019; Wei, 2019; Zhu & Bo, 2022) and the potential for pet insurance development (Yan & Wang, 2021), very few studies consider a thorough overview of pet insurance from a supplyside perspective. Therefore, in order to improve knowledge of pet insurance in China, it is necessary to conduct a thorough analysis of the development of pet insurance from the perspective of pet insurance providers.

### **Research Methodology**

This study used secondary data to analyze the development of pet insurance in China. The data is collected through pet insurance reports and the official websites that relates to pet insurance such as insurance business websites, the AntSure platform, and JD.com.

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#### **Analysis and Discussion**

First, this section discusses the history of pet insurance in China. The second section examines the current condition of pet insurance providers, followed by an overview of the most common pet insurance options. Next, the terms of the pet insurance are reviewed. Finally, the Chinese pet insurance industry is identified.

# The History of Pet Insurance

Hua Tai Insurance introduced the "Small Healthy Family" household insurance in 2004, which covered pet liability as a supplementary insurance coverage for the first time (Guo, 2020; Jiang, 2016; Wei, 2019). With the increase in pet ownership, pet insurance is only available as an add-on to household insurance plans, which does not fulfil the genuine needs of pet owners (Guo, 2020). In 2005, the Beijing Branch of China Pacific Property Insurance Company introduced Beijing Liability Insurance for dog owners. According to Guo (2020), Jiang (2016), and Wei (2019), this is the first independent pet insurance. However, the product is only limited to ensuring that third parties can receive sufficient compensation in the event of an unintentional dog bite, and there are several limitations, such as breeders and their families being bitten by dogs not covered by the protection. Then, because just a few pet owners purchased pet liability insurance, and insurance company promotion was insufficient, it was discontinued after a few years (Jiang, 2016).

Taiping Insurance introduced pet third-party liability insurance in 2008, and it has grown rapidly in just three years. Since then, prominent insurance companies such as PingAn Property Insurance, The People's Insurance Company of China Property Insurance, and Sunshine Insurance have established comparable pet insurance operations. However, due to illogical product design and poor marketing and popularisation in the early stage, pet liability insurance has significantly departed from the expectations of the major insurance companies in the pet insurance market and even withdrew from the market for a period of time (Guo, 2020).

Pet health insurance became available in 2014, with the "Pet Lebao" family pet health insurance guarantee plan being the first. It was officially introduced by the People's Property Insurance Company of China, the China Animal Husbandry Association, and Beijing Pet Sun Science and Technology Development Co., LTD (Jiang, 2016). PingAn Insurance then established the "Pet Treasure" pet insurance program and began collaborating with a variety of connected pet organisations. MinAn Insurance Shanghai Branch signed and launched the Comprehensive Pet Insurance policy "Pet, Joy, and Carefree" in April 2015. TaiKang Online and 58 Heart Pet introduced TaiKang "Heart Pet Protection" in December 2015, which primarily provides health insurance for pet dogs sold through the 58 Heart Pet platform. Pet Castle partnered with PingAn Insurance to develop "Pet Insurance" in November 2016, and HuaAn Insurance updated pet liability insurance in 2017. Despite this, pet insurance has not been widely adopted due to the difficulty of pet identification and the time-consuming nature of claims.

On July 20, 2020, a watershed moment occurred in China's pet insurance industry. The AntSure platform uses pet nose-print recognition technology. Pet nose prints are comparable to human fingerprints in that they do not change as they grow, ensuring uniqueness and invariability. In other words, no two cats or dogs in the world have the same nose prints. This platform, in collaboration with Land Insurance and ZhongAn Online, introduced this

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technology to pet insurance for the first time. The identification success rate exceeds 99% (Wu, 2020). China Life, Ping An, China Pacific Insurance, China Continent Insurance, ZhongAn Online, and other insurance companies are currently participating in the pet health insurance segment. AntSure, Jing Dong, and other Internet platforms have also started selling pet health insurance (Zheng, 2022). Overall, pet insurance has been around for twenty years. However, the development of pet insurance does not adhere to the life cycle development paradigm. Its development is relatively complex, spanning from germination to disappearance, reappearance, and then continued development. Pet insurance is now in its early stage of development in China.

# The Situation about Pet Insurance Providers

Rock and Degeling (2013) established that pet regulations in Australia treat pets as private property owned by individuals. The civil code in China considers pets to be family property, hence pet insurance is classified as property insurance. According to China's Insurance Law, only property insurance companies may design and sell property insurance products. There is no pet insurance firm in China, but it is clear that the property insurance companies can create and sell pet insurance.

There are currently 89 property insurance companies in China, and 64 of them are involved in pet insurance business, according to the property insurance company registration product catalogue on the State Financial Supervision and Administration's official website. Almost 60 property insurance firms provide pet liability insurance. Pet liability insurance is typically offered by these insurance providers as an add-on to home contents insurance.

Furthermore, the property insurance company registration product catalogue lists 30 property insurance businesses that provide pet health insurance. However, after studying the official websites of these property businesses that provide pet health insurance, it was discovered that just seven insurance companies offer relevant pet health insurance products. They are ZhongAn Online, Cathay Insurance, China Continent Insurance, PingAn Property Insurance, TaiKang Online, JingDong Allianz, and HuaTai Property Insurance, respectively. The remaining 23 property insurance providers' websites do not mention pet health insurance. As a result, it appears that only the top seven property insurance companies in China's pet insurance industry prioritise pet insurance.

# The Main Pet Insurance Products

Compared to other nations, pet insurance in China is divided into three categories: pet health insurance, pet liability insurance, and pet comprehensive insurance. The most significant distinction between them is the coverage.

Pet health insurance is a type of property and casualty insurance (Wilson, 2020), with an indemnification contract between the provider and the pet owner (Dunn, 2006). In China, pet health insurance refers to ensuring that the pet's body is reimbursed for the direct costs of injury caused by disease or an accident. Pet health insurance not only covers the expense of routine care, but it also covers specific care when the pet is seriously ill and requires specialist and emergency centre services (Block, 2021). Thus, pet health insurance relieves financial stress on pet owners while providing adequate care (Ackerman, 2021; Springer et al., 2022), and it minimises the probability of pre-surgical economic euthanasia (Anderson et al., 2021; Boller et al., 2020). In China, pet liability insurance primarily refers to the insured's legal liability for the personal injury or death of a third party, as well as the direct loss of property, caused by the insured's pet owned or cared for during the insured period, for which the insurer will compensate in accordance with the insurance contract. As such, it implies that pet liability insurance can cover losses caused by pets to third-party injuries (Wei, 2019). The insurer is also responsible for the costs of arbitration or litigation resulting from the insured incident, lawyer's fees paid with the insurer's prior written approval, and the insured's financial liability. In practice, some insurance firms' pet liability insurance covers compensation for injuries caused by the pet to the owner.

Pet comprehensive insurance is the combination of pet liability and pet health insurance coverage; in other words, pet comprehensive insurance is the same as pet liability and pet health insurance. It can provide total protection to pets and their owners.

# The Analysis of Pet Insurance Policy Terms

Compared to other nations, Chinese pet insurance policies cover only cats and dogs. Although it has been reported in the media that the People's Property Insurance Company of China sells horse insurance, this information is not available on their official website. In addition, there is no insurance for pets in China, including rabbits and birds. At the product design level, the varieties of insurance products are quite limited, and there are numerous constraints, which impact pet owners' desire to cover. For example, most pet insurance policies have restrictions on location, hospital, pet age, and so on (Zheng, 2022). Appendix A contains information about several product categories marketed in the pet insurance industry.

According to an analysis of the current way of selling pet insurance policies, pet insurance is sold online. In addition, when filing a claim, pet owners must submit all papers online. Human health insurance is typically deducted directly from some hospitals, and some health insurance plans even pay reimbursement as soon as the insured is diagnosed with a critical sickness. As a result, pet insurance reimbursement systems are more difficult than those used for human health insurance. Furthermore, Ackerman (2021) stated that, in some situations, pet insurance claims can be initiated by veterinary clinics and reimbursed by enrolled pet hospitals in the United Kingdom. However, in China, pet owners frequently pay for medical expenses in full and then wait for compensation from their pet insurance provider (Drogt, 2018; Othman, 2014). It is clear that makes it more difficult for insured pet owners to receive payment.

Pet comprehensive insurance is the most expensive, followed by pet health insurance and pet liability insurance in China. Except for pet liability insurance, insured pets in China have age limits ranging from 2 months to 10 years old, as in most other nations. Like other nations, pet insurance policies in China will have three different prices for pet owners to pick from. Pet health insurance, and often known as comprehensive pet insurance, provides several value-added services in China, just as it does in other countries. The value-added services of deworming, physical checkup, and immunisations vary according to the premium paid.

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China's pet health insurance or pet comprehensive insurance has varied compensation percentages depending on whether the pet hospital works with the insurance firm. Non-cooperative pet hospitals have a compensation ratio of only 40%, which is significantly lower than the 70% compensation ratio of pet clinics that interact with insurance providers. One possible reason for this condition is a reduction in the moral hazard. As we all know, when most people have regular physical exams or go to the hospital for treatment, the hospital keeps a record of their visit. With the growth of the Internet, hospitals across the country are now essentially connected to the Internet, allowing doctors to check the same patient's medical records. Pet hospitals, unlike human hospitals, are unable to compare the medical records of the same pet across many institutions. As a result, when it comes to pet insurance, sick pets are more likely to be insured, and pet insurance carries a higher moral hazard than human health insurance. Clearly, insurance firms prefer to encourage pet owners who acquire pet health insurance or pet comprehensive insurance to seek medical treatment at certified hospitals, thereby lowering moral hazard.

#### The Pet Insurance Business

Pet insurance has a 20-year history in China. Some experts have noted that the present penetration rate of pet insurance in China is less than 1% (Han, 2021). According to the associated analysis, Sweden has the highest pet insurance penetration rate, at around 40%, while the Japanese market has a pet insurance penetration rate of 10%. The North American Pet Health Insurance Association's research report revealed that the overall premium volume for pet insurance in Canada is expected to reach 485.5 million Canadian dollars (348.6 million dollars) by 2023. According to a "Swiss Re" study survey, if the growth rate is about 25%, pet insurance premiums in China are predicted to reach approximately 193.48 million US dollars by 2025, with a 1.2% penetration rate. According to ZhongAn Online's annual report, pet insurance premiums have increased by about 150% year on year, totalling 500 million yuan (\$69.4 million). Although the penetration rate for pet insurance is quite low when compared to Korea and Japan. Pet insurance has a promising future in China due to the vast number of pet owners who raise cats or dogs and the dynamic link between owners and pets.

According to a survey done by KuRunData, a consulting firm, in 2024, PingAn is the most favoured property insurance business among pet owners. Furthermore, the majority of pet owners pay between 500 and 1000 yuan (69 and 139 dollars) on pet insurance (KuRunData, 2024). According to data from the AntSure platform in 2023, the majority of insured pet owners are female, accounting for 70%, while cats are the most commonly covered pets, accounting for 60%. Furthermore, Generation Y, which refers to persons born between 1980 and 2000, is the driving force behind pet insurance purchases in China (Apa et al., 2023). According to a poll, 98.2% of insured pet owners choose to get pet health insurance (Petdata, 2024). Finally, these findings roughly mirror the scenario of pet owners who obtain pet insurance.

### **Conclusion and Future**

This research provides an overview of pet insurance in China from several perspectives. To begin, this study discovered that pet insurance has a shorter history than industrialised countries, and only a tiny percentage of property insurance companies pay more attention to pet insurance while designing reasonably wealthy main pet insurance

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products. Additionally, pet owners are more likely to purchase pet insurance from PingAn Property & Casualty Insurance Company. Second, this study found that pet health insurance, pet liability insurance, and pet comprehensive insurance are the most popular products in China's pet insurance industry. Furthermore, only cats and dogs are covered in China, and the current pet insurance products have some difficulties, such as too many exemption clauses, doubtful coverage, and a poor price value (Guo, 2020). Finally, this study shows that there is still a significant gap in the development of pet insurance in China when compared to some developed countries such as Sweden, Canada, and Japan, whether in terms of pet insurance penetration, premium scale, or pet insurance company operations. However, it is worth noting that the pet insurance business is quickly expanding and has a promising future in China due to the large number of pet owners raising cats or dogs and the dynamic interaction between them. This research makes some contributions for pet insurance market. On the one hand, this study summarized the existing problems of Chinese pet insurance market and these outcomes contribute to boost the existing literature on pet insurance. On the other hand, this research will help scholars and pet insurance providers gain a more comprehensive understanding of the Chinese pet insurance market.

There are some limitations to this study. For example, this study focusses on the supply side of pet insurance and provides a comprehensive overview of pet insurance in China, whereas the market is the interaction of supply and demand. Thus, in the future, some researchers can undertake study to gain a thorough understanding of the pet insurance industry from the standpoint of demand. This study also includes some information about insured pet owners for pet insurance, but it excludes information about uninsured pet owners. Some future studies could look into why many Chinese pet owners do not get pet insurance in order to have a better understanding of the Chinese pet insurance market.

Vol. 14, No. 11, 2024, E-ISSN: 2222-6990 © 2024

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Appenaix <i>i</i>	-										
Category	Pet liability Insurance			Pet Health Insurance			Pet Comprehensive Insurance				
Insured Pets	Cats and dogs	5									
Age Limits	No			60 days to 10 years old			3 months to 10 years old				
Coverage	Personal injury, medical expense A plus property damage, rescue expense, legal cost			Common and serious diseases (except congenital heredity)			Common and serious diseases (except congenital heredity); personal injury, property damage, pet death				
Waiting Period	No			Injury : 10days; Cancer and oral diseases: 90days; General diseases: 30days							
Price (year)	18.96-58	59.76	128- 207.6	96- 300	379- 630	768.9 6	299- 1296	999- 1896	2856		
Amount Insured	50,000- 100,000	120,00 0	201,000 - 302,000	4,000- 12,00 0	12,000 - 20,000	30,00 0	70,800- 15,080 0	232,000 - 301,000	451,50 0		
Single Deductibl e	Medical expense:20 0	A plus damage S	property 500	200 for outpatient service			0				
Indemnity Ratio	No			Designated hospitals:70%; non-designated hospitals:40%			Designated hospitals:60%; non-designated hospitals:40%				
Term	One year										
Claim	Online										
Additional Service	No	Telephone consultation, vaccine, external deworming, physical examination and so on									
Note	When pet owners purchase pet insurance, they do not need to provide the dog's registration certificate, and the pet does not have to be microchipped. Local laws and regulations prohibit ordinary citizens to keep dog pets or cat pets are not covered.										

Data source: Alipay platform, and JD.COM

### References

Ackerman, L. (2021). Pet-Specific Care for the Veterinary Team. In (pp. 843-855): wiley.

- Allen, J. M., Kellegrew, D. H., & Jaffe, D. (2000). The experience of pet ownership as a meaningful occupation. *Canadian Journal of Occupational Therapy*, *67*(4), 271-278.
- Anderson, S., Stevenson, M. A., & Boller, M. (2021). Pet health insurance reduces the likelihood of pre-surgical euthanasia of dogs with gastric dilatation-volvulus in the emergency room of an Australian referral hospital. *New Zealand Veterinary Journal*, 69(5), 267-273. doi:10.1080/00480169.2021.1920512
- Apa, I., Aisa, P., & Tmall. (2023). *China Pet Industry Annual Report(2023)*. Retrieved from www.sgpjbg.com
- Block, G. (2021). Providing Cost-Effective Care for Those in Need. In *Pet-Specific Care for the Veterinary Team* (pp. 835-838): wiley.
- Boller, M., Nemanic, T. S., Anthonisz, J. D., Awad, M., Selinger, J., Boller, E. M., & Stevenson, M. A. (2020). The Effect of Pet Insurance on Presurgical Euthanasia of Dogs With Gastric Dilatation-Volvulus: A Novel Approach to Quantifying Economic Euthanasia in Veterinary Emergency Medicine. *Frontiers in Veterinary Science*, 7, 10. doi:10.3389/fvets.2020.590615

Vol. 14, No. 11, 2024, E-ISSN: 2222-6990 © 2024

- Brown, S. G., & Rhodes, R. E. (2006). Relationships among dog ownership and leisure-time walking in Western Canadian adults. *American Journal of Preventive Medicine*, *30*(2), 131-136.
- Cai, J., Zhou, F., & Tong, L. (2022). Application and exploration of blockchain technology in pet healthcare. *Livestock and Poultry Industry, 33*(09), 54-56. doi:10.19567/j.cnki.1008-0414.2022.09.018
- Dunn, L. (2006). Small animal practice: billing, third-party payment options, and pet health insurance. *Veterinary Clinics: Small Animal Practice, 36*(2), 411-418.
- Guo, C. (2020). Study on Purchase Intention and Its Influencing Factors In Pet Insurance-Illustrated by the case of Zhengzhou City. (Master master), Dongbei University Of Finance And Economics, Retrieved from http://www.cnki.net
- Han, L. (2021). *Research on problems and countermeasures of pet market development in China.* (Master), Shanghai University of Finance and Economics, Retrieved from http://www.cnki.net
- Hardie, S., Mai, D. L., & Howell, T. J. (2023). Social Support and Wellbeing in Cat and Dog Owners, and the Moderating Influence of Pet–Owner Relationship Quality. *Anthrozoös*, 36(5), 891-907. doi:10.1080/08927936.2023.2182029
- Hoffman, C. L., Stutz, K., & Vasilopoulos, T. (2018). An examination of adult women's sleep quality and sleep routines in relation to pet ownership and bedsharing. *Anthrozoös,* 31(6), 711-725.
- Iresearch. (2023). China Pet Health Consumption Report. Retrieved from https://www.sgpjbg.com/baogao/116422.html
- Jiang, M. (2016). *The Analysis of Factors Affecting Willingness to Buy Pet Insurance-Shenyang as an example.* (Master), Liaoning University, Retrieved from http://www.cnki.net
- KuRunData. (2024). *Pet Industry Market Trend Change Report*. Retrieved from www.sgpjbg.com
- Mooi, E., Sarstedt, M., & Mooi-Reci, I. (2018). *Market research: The process, data, and methods using Stata*: Springer.
- Petdata. (2024). "2023-2024" China Pet Industry White Paper (Consumption Report). Retrieved from https://petdata.cn/
- Ran, L. (2019). Analysis on the development status of "Pet Liability Insurance". *Legal Expo*(16), 242.
- Révész, A., & Ozsvári, L. (2022). The perception and experience of pet insurance among pet owners and veterinary practitioners in Hungary. *Magyar Allatorvosok Lapja*, 144(2), 91-99.
- Rock, M., & Degeling, C. (2013). Public Health Ethics and a Status for Pets as Person-Things Revisiting the Place of Animals in Urbanized Societies. *Journal of Bioethical Inquiry*, 10(4), 485-495. doi:10.1007/s11673-013-9478-z
- Smith, B. P., Browne, M., Mack, J., & Kontou, T. G. (2018). An exploratory study of humandog co-sleeping using actigraphy: do dogs disrupt their owner's sleep? *Anthrozoös*, 31(6), 727-740.
- Song, A. (2020). *Research on purchase intention of pet liability insurance in Zhengzhou.* (master), Zhengzhou University, Retrieved from http://www.cnki.net
- Springer, S., Lund, T. B., Grimm, H., Kristensen, A. T., Corr, S. A., & Sandoe, P. (2022). Comparing veterinarians' attitudes to and the potential influence of pet health insurance in Austria, Denmark and the UK. *Veterinary Record*, 190(10), 10. doi:10.1002/vetr.1266

Vol. 14, No. 11, 2024, E-ISSN: 2222-6990 © 2024

- Stockemer, D., Stockemer, G., & Glaeser, J. (2019). *Quantitative methods for the social sciences* (Vol. 50): Springer.
- Sukono, Susanti, D., Ridwan, F., Riaman, Hertini, E., & Saputra, J. (2023). Analyzing the community decision making to purchase pet insurance: Case study of animal lovers in Indonesia. *Decision Science Letters*, *12*(1), 29-40. doi:10.5267/dsl.2022.10.008
- Sundell, I. B. (2018). What can i do when ruger is limping? *Journal of Stem Cells, 13*(2), 107-112.
- Wei, X. (2019). Research on the Development of Pet Liability Insurance in China-Taking the Pilot of "Pet Smart Management+Insurance"in Ningbo as an Example. (Master), Liaoning University, Retrieved from http://www.cnki.net
- Williams, A., Williams, B., Hansen, C. R., & Coble, K. H. (2020). The impact of pet health insurance on dog owners' spending for veterinary services. *Animals*, *10*(7), 1162.
- Wilson, K. L. (2020). Underwriting Criteria, Practices, and Tools of Pet Health Insurance Companies. *Conn. Ins. LJ*, 27, 359.
- Wu, S. (2020). Alipay has released a technology to identify nose marks in pet insurance. *China's working dog industry*.
- Yan, H., & Wang, X. (2021). Pet insurance product design and risk control management. *China Insurance*(10), 54-57.
- Zhang, Y. (2021). Value and Application of Pet Liability Insurance in City Pet Management. Journal of Shanghai Police College, 31, 9. doi:10.13643/j.cnki.issn2096-7039.2021.06.005
- Zheng, H. (2022). Zhongan pet insurance annualized premium broke 100 million! The post-90s generation contributed to the new increment of pet medical insurance. Retrieved from https://baijiahao.baidu.com/s?id=1728935727184969922&wfr=spider&for=pc
- ZhongAn, O., & AntSure, P. (2023). *Pet Insurance Industry White Paper*. Retrieved from www.sgpjbg.com
- Zhu, S., & Bo, Y. (2022). Research on pet insurance product market analysis and development strategy in China. *Shanghai Business*(06), 196-198.