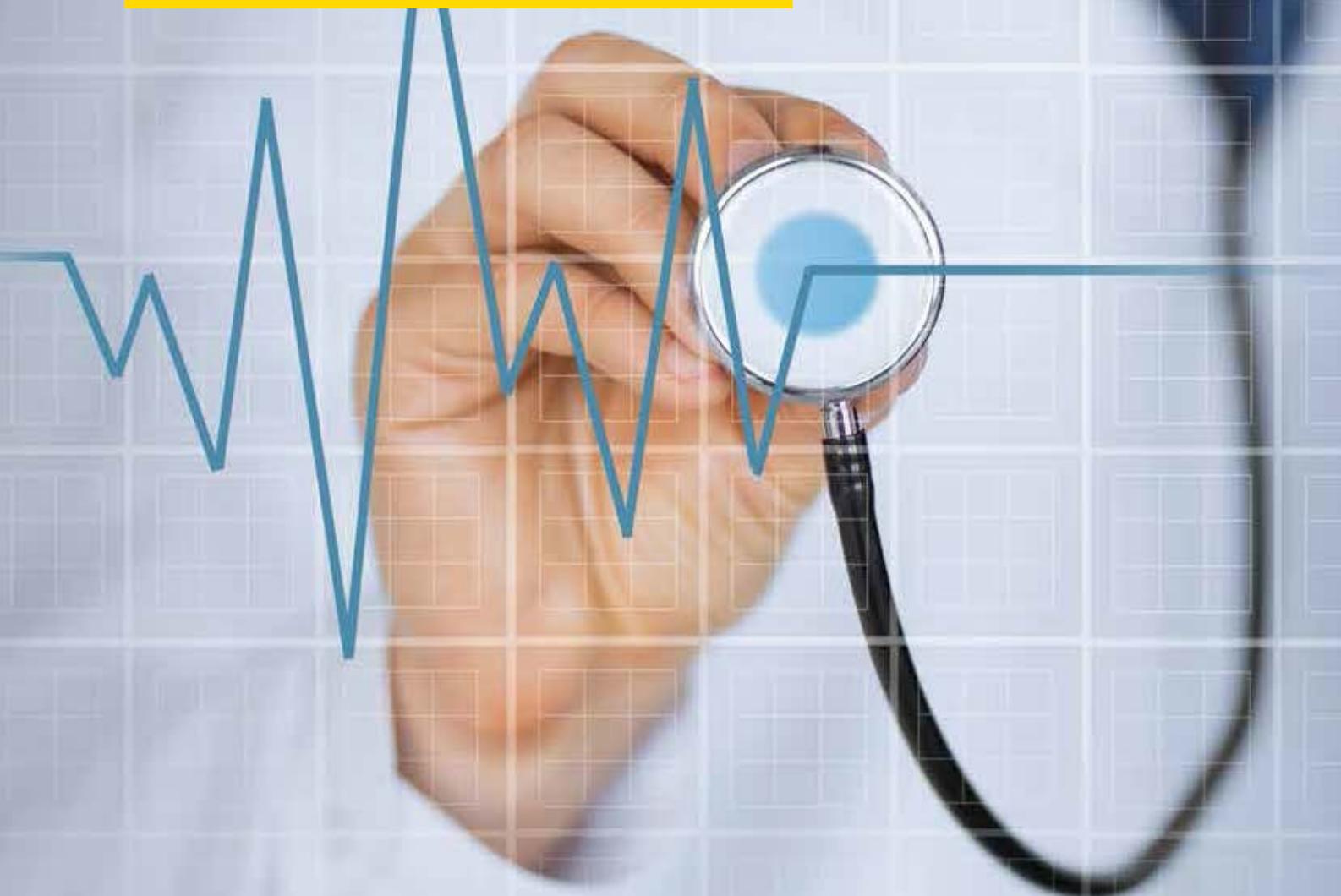


# White Paper on China Commercial Health Insurance





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# Foreword

China's commercial health insurance market is poised for massive growth driven by national policies, demographics and consumer demand. Commercial health insurance is both an integral part of building China's multi-level medical security (insurance) system and an inherent requirement of the "Healthy China 2030" national strategy, which continues to open health care to the private sector.

"Healthy China" is central to the Chinese Government's agenda. In his remarks to the 19th National Congress of the Communist Party of China, President Xi Jinping demonstrated the government's tremendous political will toward investing in health care. He noted, "What we now face is the contradiction between unbalanced and inadequate development and the people's ever-growing needs for a better life." President Xi said health is a prerequisite for people's all-round development and a precondition for economic and social development. Conversely, he also stressed that if the problems in the health sector are not effectively addressed, people's health may be seriously undermined, potentially compromising economic development and social stability.

Against this backdrop, the market shows enormous growth potential. Demand for health insurance is being driven by: China's current health care funding structure, increasing personal health expenditure, an aging population, accelerating urbanization, a burgeoning middle-class and the growing incidence of chronic disease. With China's current social-medical security capacity unlikely to cover all the growing needs, the scene is set for commercial health insurers to fill this ever-expanding gap in the market.

However, the market is facing considerable internal and external challenges. Internally, many life and property insurers are trying to run health insurance business on legacy systems and processes that are not designed for the unique characteristics

and risk factors involved in health insurance. Many companies also lack sales models that enable them to gather the detailed customer information required to offer personalized products, offer scenario-based insurance or provide a quality customer experience to maximize value. Externally, health insurers must find a way to work with other health ecosystem members: medical care providers, insurance companies, pharmaceutical enterprises and health management service providers (MIPH). This will require better data sharing, common data standards and, most importantly, a platform to connect all players in this "many-to-many" market.

To support health insurance businesses address these challenges and achieve their growth objectives, EY and CPIC Allianz Health Insurance Co., Ltd. (CPIC Allianz) have jointly issued this *White Paper on China Commercial Health Insurance*.

The paper examines the drivers of commercial health insurance demand, reveals new consumer research about health insurance buying behavior and charts the pain points the industry is facing. It also recommends what health insurers need to do to succeed in the future market, drawing on lessons from domestic and foreign commercial health insurance case studies.

We hope it provides useful insights to help health insurers thrive and grow in this important market.

**E**Y is a global leader in assurance, tax, transaction and advisory services. EY's Insurance Advisory Team has a long-term commitment to offering insurance companies enterprise strategy planning, business operation scheme, technology capacity planning, IT system building and other services. In health insurance, EY works closely with regulators, domestic and foreign insurance companies, health management companies, medical organizations and pharmaceutical enterprises to explore new growth strategies and health insurance innovation.

**C**PIC Allianz Health Insurance is a member of China Pacific Insurance (Group) Co. Ltd. (CPIC), and was jointly established by CPIC and German Allianz SE (Allianz Group), two global top 500 companies. CPIC Allianz Health Insurance is committed to health and care, and provides comprehensive health insurance and health management services for individuals and groups. By combining CPIC's vast customer resources and extensive distribution network with the expertise of Allianz Group, CPIC Allianz Health Insurance seeks to become a leading health insurance company in the Chinese market, continually creating better health outcomes and value for its customers.

# Urgent demand for commercial health insurance



Public medical insurance is insufficient to meet China's growing health insurance demand, creating significant growth opportunities for commercial health insurance to supplement the social medical security system. This section provides an overview of China's current health care system and charts the five factors driving this increased demand.

## How China's health care system compares with those in other countries

Global health care systems are generally classified into the four categories shown in Table 1. At present, China's model is similar to Germany's national social health insurance system. It differs strongly from the US commercial insurance system approach. Instead, China's government-led, national social health care system already offers "wide coverage" and is proposing to achieve "full coverage" by 2030. This will require the assistance of commercial health insurers to supplement the services already being provided by public organizations.

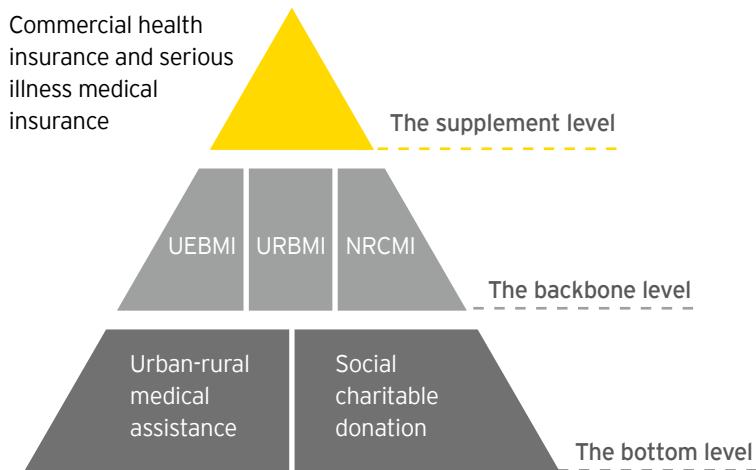
Table 1: Overview of major global health care systems

Country	Health care system	Summary	Features
Germany	National social health insurance system	A health care system focused on mandatory social health insurance and supplemented by commercial insurance. It applies a uniform, social insurance management system that encourages competition. The emphasis is on market rather than Government's provision of social health insurance.	<ul style="list-style-type: none"> <li>► Wide coverage</li> <li>► Relatively good social equity</li> <li>► Fee is partially paid by citizens, but the Government controls the level of fees charged</li> <li>► Market mechanism</li> </ul>
UK	Universal health care system	The Government directly provides health insurance by appropriating taxes to fund public hospitals, which offer all UK residents basic medical services free of charge or at a very low cost.	<ul style="list-style-type: none"> <li>► Wide coverage</li> <li>► Relatively good social equity, yet unpopular</li> <li>► Heavy burden on the Government</li> <li>► Lack of market mechanism</li> <li>► Low efficiency</li> </ul>
US	Commercial health insurance	Provision is largely via commercial health insurance purchased by employers or individuals voluntarily. The coverage content is linked to the amount of insurance premium. The Government is only responsible for the basic health insurance of vulnerable and other minority groups.	<ul style="list-style-type: none"> <li>► Narrow coverage</li> <li>► Light burden on the Government</li> <li>► Strong market mechanism</li> <li>► Relatively poor social equity</li> <li>► Flexible and diversified participation</li> </ul>
Singapore	Mixed financing health care system	Mixed financing system that includes nationalized life insurance schemes and deductions from the compulsory savings plan for working Singaporeans and permanent residents. This mechanism is intended to reduce the overuse of health care services.	<ul style="list-style-type: none"> <li>► Wide coverage</li> <li>► Little social aid</li> <li>► All fees paid by citizens</li> <li>► Compulsory saving to pay fees</li> </ul>

China's social health care system has three levels of funding:

1. **The bottom level** - funded by urban-rural medical assistance and donations led by the government
2. **The backbone level** - funded by the Urban Employee Basic Medical Insurance (UEBMI), the Urban Resident Basic Medical Insurance (URBMI) and the New Rural Cooperative Medical Insurance (NRCMI), which is led by the government and taken out by individuals and organizations
3. **The supplement level** - funded by serious illness medical insurance and commercial health insurance taken out by individuals and organizations

**Figure 1: China's social health care system**



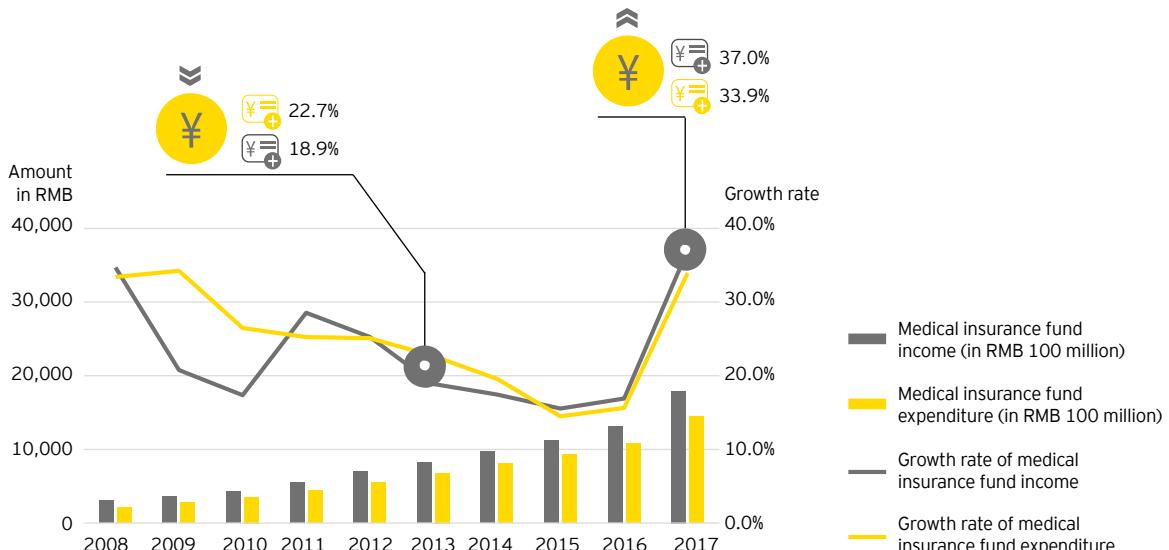
## Factor 1: Deficit crisis in the national medical insurance fund

China's social medical insurance fund is managed in line with the principle of "expenditure within the limits of income, and balance of income and expense with a small surplus." However, *China Medical and Health Services Development Report 2014* indicates that the growth in income from the UEBMI fund declined due to the slowdown in payroll for urban employees. At the same time, medical insurance fund costs continue to increase, given sharply rising medical expenses, expanding medical service demands and the aging population.

Based on the growth rate of income and expenditure of the UEBMI fund prior to 2013, the report forecasts RMB 735.3 billion of accumulated losses by 2024. In response, the government has taken measures to strengthen the fund's financial management and stepped in to fund fee control. As a result, between 2015 and 2017, income was slightly higher than expenditure; however, this has not completely eliminated concerns about the fund's deficit.

To reduce pressure on the social health care system, it would be prudent for the government to accelerate the development of commercial health insurance while it further strengthens the effective management of its medical insurance funds.

**Figure 2: Income and expenditure in China's medical insurance fund 2008-17**

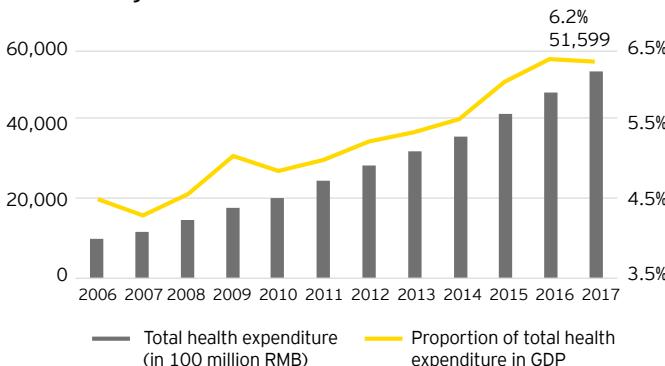


Source: Chinese National Bureau of Statistics, *China Statistical Yearbook (2017)*

## Factor 2: As citizens spend more on health, the demand for commercial health insurance is growing

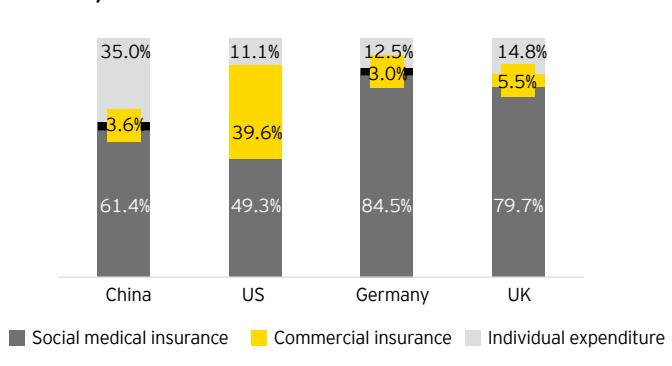
In 2017, China's total health expenditure reached RMB 5.16 trillion, accounting for 6.2% of GDP – a proportion that has steadily increased in recent years. In 2017, individual out-of-pocket health expenditure reached RMB 1.49 trillion, accounting for 28.8% of total health expenditure.<sup>1</sup> Although the proportion of individual expenditure has continuously decreased, it is still higher compared with other developed countries with different health insurance models, placing a heavy burden on individual medical expenditure with insufficient protection.

Figure 3: Total health expenditure and GDP proportion in China during 1997-2017



Source: "Chashu," Chinese National Bureau of Statistics of China, data.stats.gov.cn/, 10 April 2018

Figure 4: Medical expenditure structures in China, the US, Germany and the UK in 2015



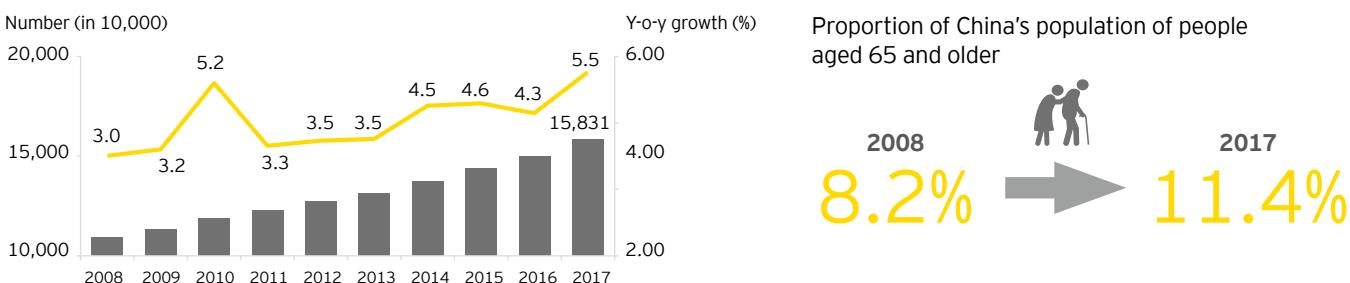
Source: "search," World Health Organization (WHO), www.who.int/en/, 13 April 2018

## Factor 3: China's aging population will put enormous pressure on social health and elderly care, requiring commercial disability insurance and long-term care insurance

The number and percentage of China's population aged 65 and older has increased steadily year-on-year (y-o-y) as seen in the figures, reaching 158 million and 11.4% in 2017.<sup>2</sup> By 2050, forecasts suggest that China will have 329 million people aged 65 and older, including 120 million older than 80. With the aging society, a smaller workforce and less people paying insurance premiums, social medical insurance system will face huge challenges.

This population structure will create an increasingly strong demand for disability insurance and long-term care insurance. At present, China's disability insurance and long-term care insurance only occupy a very small share of the market. According to a survey by the China Development Research Foundation, far more people are willing to buy these types of insurance when compared with those who have actually purchased it, demonstrating a huge potential to develop these nascent markets.

Figure 5: Number, proportion and growth rate of China's population of people aged 65 and older during 2008-17



Source: Compilation of data from China National Bureau of Statistics

1 2017 Statistic Bulletin on China Health Care Industry Development issued by the National Health Commission

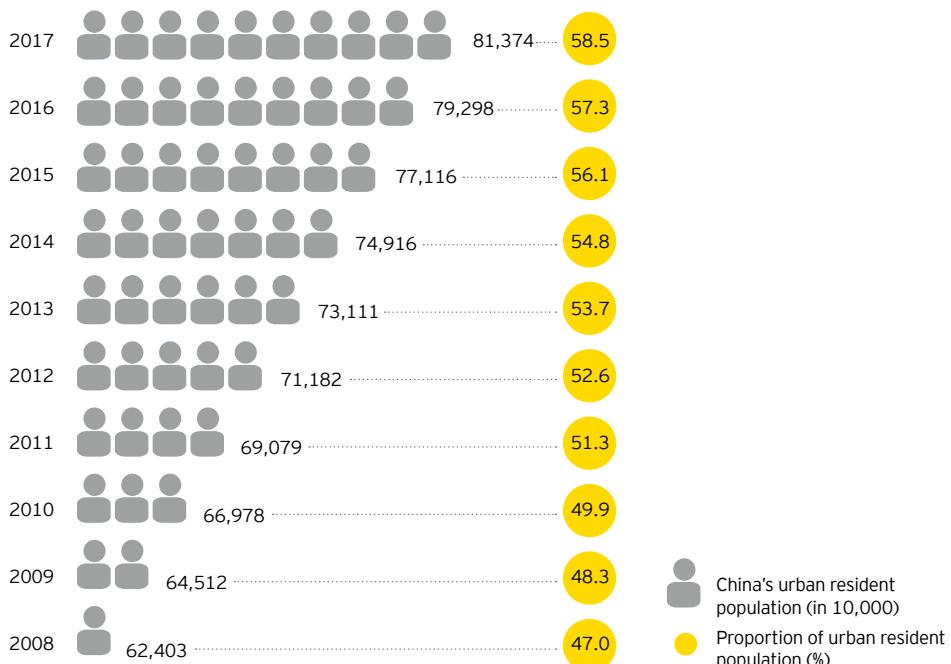
2 Chinese National Bureau of Statistics, China Statistical Yearbook (2017)

## Factor 4: The growth of the urban middle-class is increasing demand for high-quality and diversified commercial health insurance

In 2017, 37.4% of China's families were middle-income. This percentage is forecast to reach 43% in 2020 and 50% in 2025.<sup>1</sup> The number and percentage of China's urban resident population has increased year-on-year, reaching 814 million and 58.5% of China's total population in 2017.<sup>2</sup> Given developed countries have an urbanization rate of around 80%, China is still at the stage of accelerating urbanization.<sup>3</sup>

As cities expand, and their population's income increases, per capita consumption growth will take over mere population growth to become the driver of consumption growth. With China becoming one of the major source of tourists in the world's medical tourism industry, demand for commercial health insurance products containing high-quality and diversified medical care resources will only grow.

Figure 6: Number and proportion of China's urban resident population during 2008-17



Source: "Chashu," Chinese National Bureau of Statistics of China,[data.stats.gov.cn/](http://data.stats.gov.cn/), 10 April 2018

1 Chinese Academy of Social Sciences, *Social Blue Book* (2017)

2 Chinese National Bureau of Statistics, *China Statistical Yearbook* (2017)

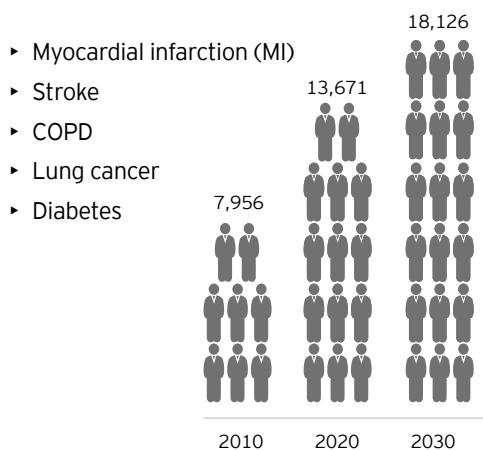
3 Urbanization rate: urban population or total population based on resident population, rather than household registered population

## Factor 5: Sharp increase in the incidence of chronic disease and greater health awareness

Chronic disease has become a major public health problem affecting China's economic and social development, with more than 200 million patients with chronic disease in the country. Chronic disease accounts for 86.6% of total deaths and more than 70% of the total disease burden.<sup>1</sup>

Meanwhile, people have become more health conscious, increasing awareness of chronic diseases. The result is new demand for personalized health insurance and health management products targeted at customers with different health needs.

Figure 7: Forecast total number of 5 common chronic diseases patients (in 10,000)



Source: "search," National Health and Family Planning Commission of the People's Republic of China (NHFPC), [www.nhc.gov.cn/zhuz/index.shtml](http://www.nhc.gov.cn/zhuz/index.shtml), 14 April 2018;  
"search," China Development Research Foundation, [www.cdrf.org.cn/](http://www.cdrf.org.cn/), 14 April 2018

<sup>1</sup> "Search," National Health and Family Planning Commission of the People's Republic of China (NHFPC)



## New consumer research into China's commercial health insurance market



To better understand customer demand for commercial health insurance and identify development opportunities and challenges for the industry, EY surveyed 2,000 consumers across major cities in China in 2016. Survey participants were mainly urban residents from the upper-middle-income group, with annual income between RMB 60,000 and RMB 300,000. Sixty-five percent of respondents had urban employee medical insurance.

## Summary of the results

The survey concluded that public health insurance offers wide but inadequate coverage, leaving considerable unmet demand for health insurance. Customers lack confidence in their ability to pay large medical expenses. They are concerned that current health insurance may not cover all the prescriptions they need; nor will it cover them to attend medical treatment in places outside of their own registered hometown (hukou).<sup>1</sup> Those who buy commercial health insurance often do so after being introduced to it by acquaintances and are generally from the high-income group.

This section details the survey's findings.

### 1. Customers commonly express a relatively low satisfaction with public health care

Showing the startling inadequacies of public health insurance, the vast majority of the survey respondents (54%) rated their coverage as only "somewhat satisfactory." Only 7% reported being "satisfied" or "very satisfied" with their coverage, while 39% were "not satisfied."

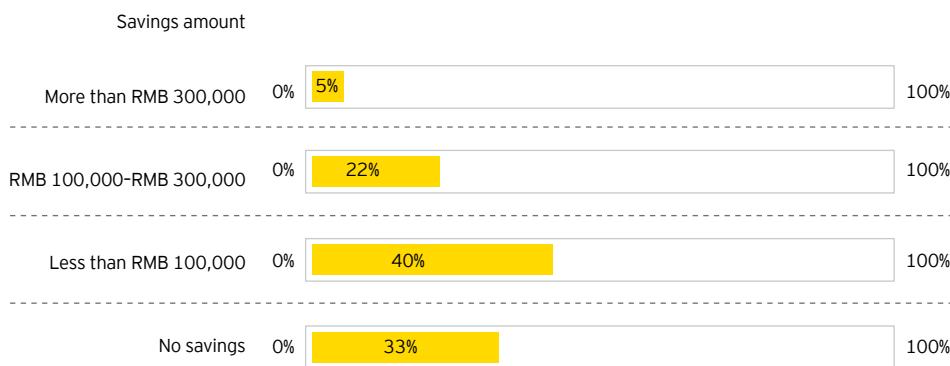
Figure 8: Survey respondents' satisfaction with public health insurance plans



### 2. Customers lack confidence in their ability to pay large medical expenses

The inadequate coverage of public health insurance means that Chinese consumers are concerned about out-of-pocket health expenditures, especially big bills. Survey respondents have generally tried to save money to meet the costs associated with unexpected health problems. Nonetheless, 33% reported no savings and 40% saved less than RMB 100,000, an inadequate amount to deal with serious health emergencies. When respondents were asked whether they had enough savings, only 22% were comfortable that they had saved enough money to cover unexpected future health problems, 37% reported inadequate savings and the rest (41%) were not sure whether their savings were enough or not.

Figure 9: Survey respondents' opinions on how much they have saved for health issues



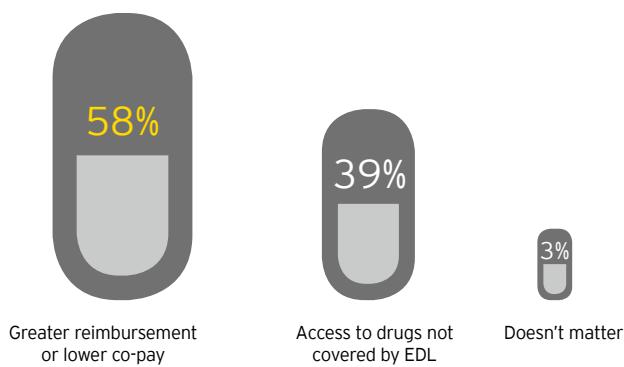
<sup>1</sup> The mainland Chinese government use registration system to manage the population. Every Chinese citizen is registered under his/her birthplace to enjoy social security. If a person moves from his rural village to city for whatever reasons including making a living, when he has illness, he may not be able to enjoy public treatment in the city and has to go back to the village where he registered to receive medical attention.

### **3. Customers strongly require greater prescription drug coverage**

Drug costs are a major concern. Despite the Chinese Government's best attempts to bring costs under control, prices continue to rise. Among the survey respondents, 77% reported that they had been prescribed drugs not covered by the Essential Drug List (EDL). When asked about the most important services in their commercial health insurance plan, 65% cited extended prescription drug coverage.

When asked more specifically about the types of prescription drug coverage they expected, 58% of respondents preferred a greater reimbursement and lower co-pay for prescription drugs, and 39% preferred coverage of prescription drugs not covered by the EDL.

**Figure 10: What is most important in your commercial health insurance plan prescription drug coverage?**

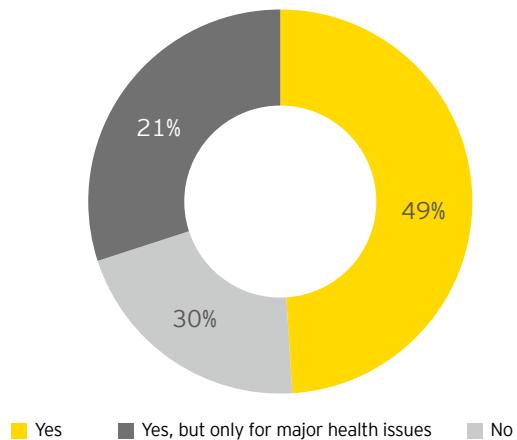


### **4. Household registration system restricts customers from taking public medical insurance services to receive medical treatment outside of their own registered hometown**

China's urban middle class is highly mobile, moving to cities where more opportunities lie. However, public health care has not caught up with this trend. Chinese citizens from some cities are subject to restrictions on reimbursement services for public health care taken in any city other than their hometown registration.

For the majority of urban professionals who are immigrants, this means they have to return to their hometowns for health care. Our survey found this is true for 79% of survey respondents who indicated they have to return to the place of their household registration to get health care. Of this group, 49% return home for any health problem, and 30% return for only serious medical issues. Since traveling for health care can be inconvenient, costly and even dangerous, commercial health insurance has an important opportunity to offer coverage that would enable this major urban cohort to receive medical treatment wherever the illness or injury occurs.

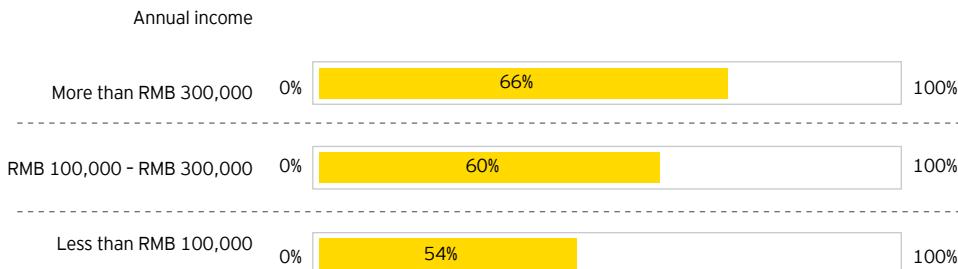
**Figure 11: Survey respondents on whether they return to their hometowns for health care**



## 5. New customers flock to the commercial health insurance market

According to our survey, 61% of the respondents are first-time purchasers of private commercial health insurance. Notably, the percentage of first-time buyers increases as income levels rise, suggesting that wealthier Chinese consumers are more willing to accept private commercial health insurance plans, making them the most likely target segment from which to build a customer base.

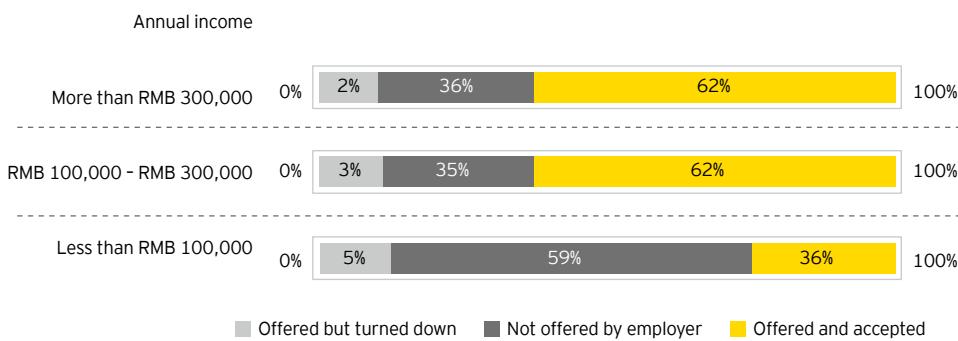
Figure 12: First-time commercial health insurance purchasers among survey respondents by income level



## 6. Upper-middle-income group commonly enjoy employer-provided commercial health insurance

Our survey found that individuals on higher incomes are more likely to receive extra, employer-provided health insurance. In fact, complete employee insurance is one of the common means of attracting and retaining top talent for Chinese companies.

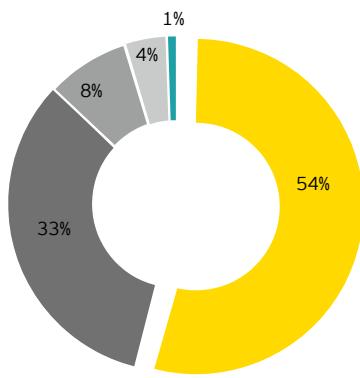
Figure 13: Employer-provided health insurance by income level



## **7. Consumers prefer to purchase commercial health insurance through acquaintances**

The survey found that more than half of respondents purchased commercial health insurance through acquaintances, a third through brokers or agents, and only a small proportion found the products online through computer or mobile devices by themselves. Most respondents know the products are available, but consider these purchases carefully. They seek the advice of brokers or acquaintances, and decide only after comparing many products. Thirty-five percent of the customers will sway between many insurance companies before making a purchasing. Even if one has been selected, 38% of the customers will carefully check to see what else the company is offering.

**Figure 14: How respondents discovered their commercial health insurance**

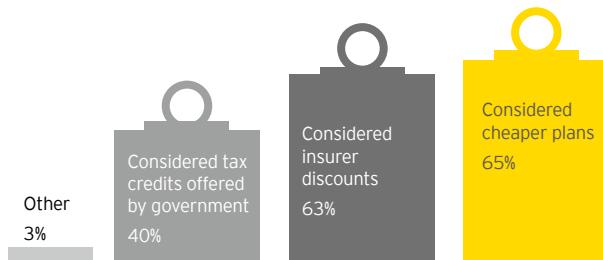


- Through acquaintances
- Through brokers or agents
- Found online through computer
- Found through mobile devices
- Other

## **8. Consumers are price-sensitive, looking for discounts and tax credits when selecting commercial health insurance**

Chinese consumers consider multiple cost factors when choosing their private health insurance plans, such as premium and discounts. Insurance companies may do well to offer initial lower premiums to attract new customers, and then expand gradually.

**Figure 15: Cost factors considered by respondents**





## State of play: China's commercial health insurance ecosystem



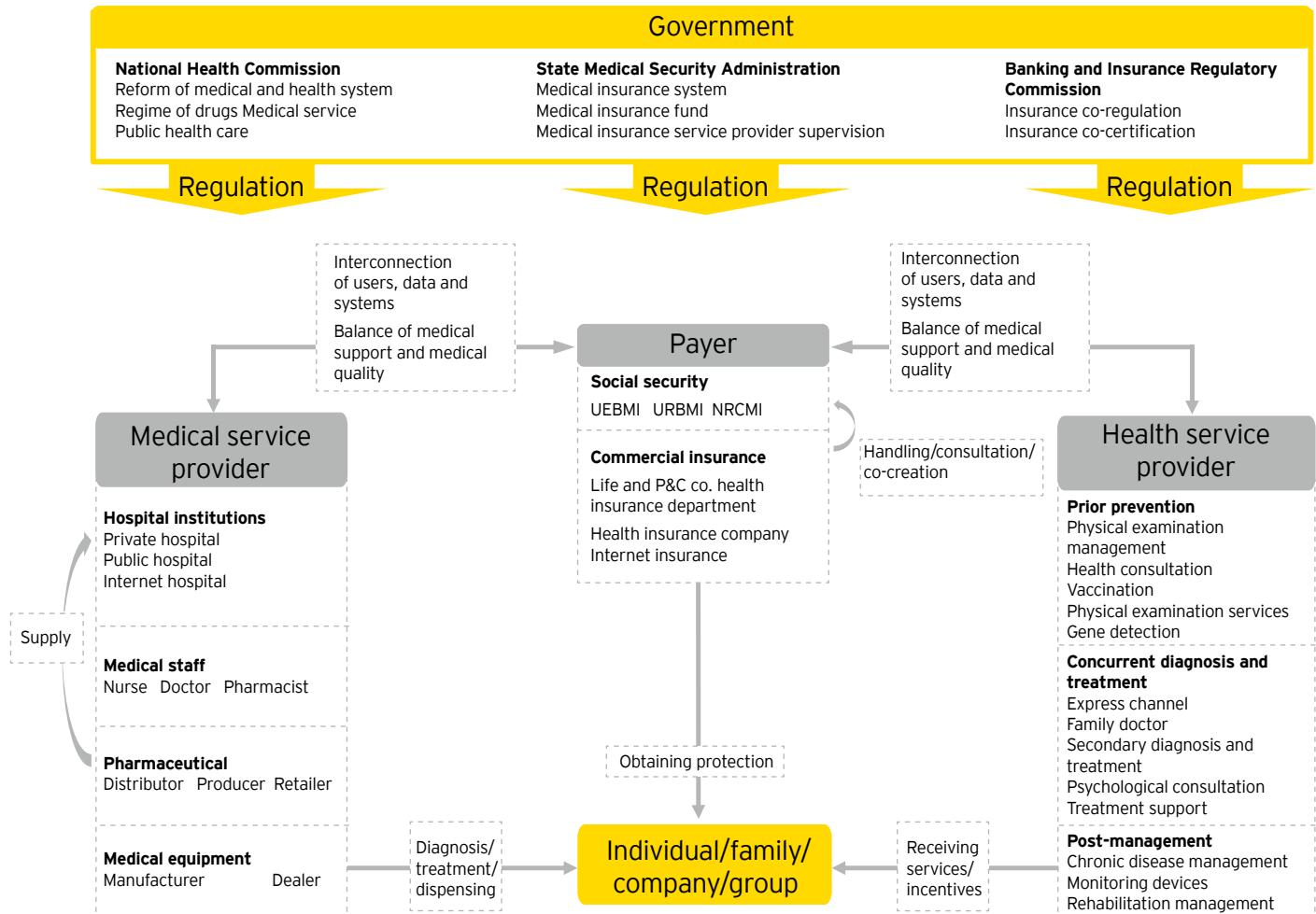
## China's commercial health insurance ecosystem

Health care is a major focus for government in China, with regulation playing an important role in the overall health ecosystem. The first session of the 13th National People's Congress established a new regulatory framework, led by the National Health Commission, the State Medical Security Administration, and the Banking and Insurance Regulatory Commission. Their mandate is to lead all stakeholders to progress medical reform to strengthen the health care system, which includes creating a regulated marketplace for commercial health insurance. Government is aware that, as health insurance has a social as well as commercial imperative, it cannot be treated as an insurance market in isolation. It must perform its role in conjunction with the other "MIPH" parties. We can see this linkage in the connected nature of the health care process, where consumers gain health incentives as they:

- Receive health insurance compensation from the medical and health service payers directly or indirectly
- Obtain diagnosis, treatment or dispensing services from medical providers
- Receive full-cycle health service from the health service providers

But, this only works efficiently if the system connects all payers and service providers with consumers and enables the free flow of data. It also requires balancing the interests of all parties to support the sustainable development of the ecosystem.

Figure 16: China's health insurance ecosystem



"Health insurance ecosystem requires the win-win cooperation of "MIPH" four parties, i.e., medical care providers, insurance companies, pharmaceutical enterprises and health management service providers."

**Zhou Lei**

*Founder*

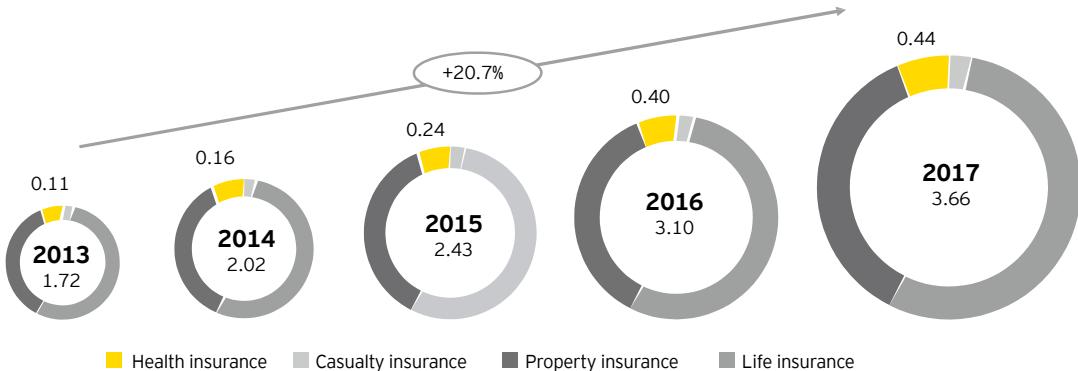
*Date Insurance Broker Co., Ltd. & Huibaohaitai Network Technology Co., Ltd.*

## Characteristics of China's current health insurance market

### China currently has a small-scale health insurance market with huge potential for high growth and broad development

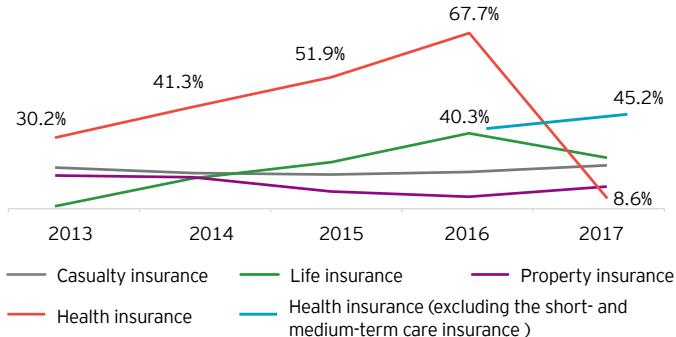
In 2017, the gross original premium income of China's insurance market was RMB 3,658.101 billion, of which the original premium income of health insurance was RMB 438.946 billion, accounting for 12%. This makes it a small-scale market compared with life insurance (58.7%) and property insurance (26.9%).<sup>1</sup>

Figure 17: Original premium income during 2013-17 (in trillion RMB)



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

Figure 18: The growth rate of premium income by insurance type during 2013-17

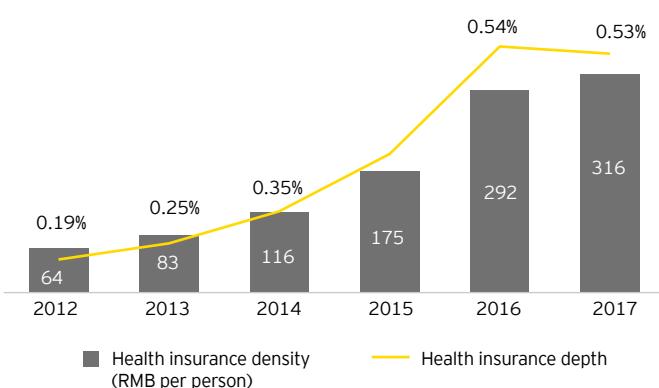


Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

Health insurance is also growing much faster than other segments in the market. Between 2013 and 2017, the growth rate of health insurance was 40.6%, compared with the market average of 20.7%.

The rapid decline in 2017 was due to regulations affecting short- and medium-term care. Excluding short- and medium-term care insurance, the growth rate remains robust, exceeding 45%.<sup>1</sup>

Figure 19: The density and depth of China health insurance during 2012-17



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018; "Chashu," Chinese National Bureau of Statistics of China, [data.stats.gov.cn/](http://data.stats.gov.cn/), 10 April 2018

As national health awareness has grown, China's health insurance market has developed swiftly. After 5 years of continuous growth, China's health insurance density<sup>2</sup> was RMB 316 per person, and health insurance depth<sup>3</sup> was 0.53% in 2017.

However, the density and depth of China's health insurance market remains behind that of developed markets, signaling a huge growth potential. The most optimistic forecasts suggest the premium income of China's health insurance market will reach RMB 1.3 trillion by 2020.

Country	Model	HI density
US (2013)	Commercial insurance	RMB 16,800 per person
Germany	Social insurance	RMB 3,071 per person <sup>4</sup>

1 "Statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

2 Health insurance density - the original premium income of health insurance / total year-end population

3 Health insurance depth - the original premium income of health insurance / gross domestic product (GDP)

4 "Search data," World Bank open data, <https://data.worldbank.org/>

The market's main health insurance products are: personal critical illness insurance and medical insurance. These have the advantage of being similar to life insurance products which are well understood by companies and consumers alike.

### Critical illness insurance

This was the largest and fastest growing segment in 2017, accounting for 56.8% of the health insurance market, up 14.8 percentage points from 2016. Its premiums of RMB 249.4 billion reflect a year-on-year increase of 46.9%.<sup>1</sup>

Illness insurance is booming because of its intrinsic advantages for all stakeholders. For policyholders, this insurance is highly correlated with their health condition. For insurance companies, critical illness insurance typically has a long payment period supporting stable cash flow. Because the product has a high perceived value, average premiums per policy are also high.

With a low penetration rate and large coverage gap, the product has enormous growth potential. China's critical illness insurance products are currently subject to uniform rates. They also lack differentiated pricing and exclude those with pre-existing conditions. In future, with better data and pricing models, innovative critical illness insurance products are expected to appear in the market, driving breakthrough growth.

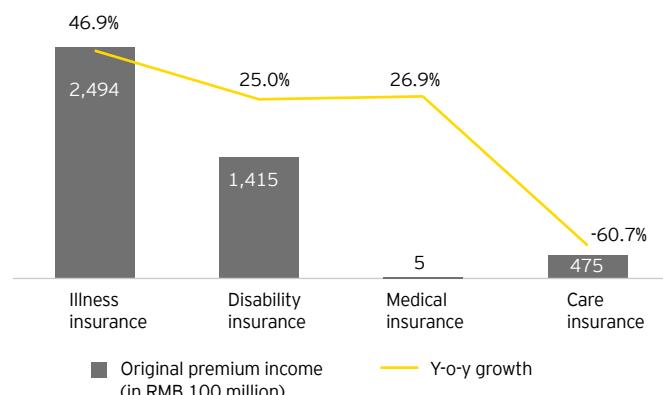
### Medical insurance

With 32.4% of the market, this product breaks into: high-, medium- and low-end medical insurance.

At the **high end**, the growing competition now includes: insurance companies, high-end medical service providers and third-party medical service organizations. Meanwhile, target customers have been shifted from foreigners working in China to China's local enterprise executives, private entrepreneurs, and business (group and individual) customers, and also gradually expanded from the first-tier cities to the second-tier cities.

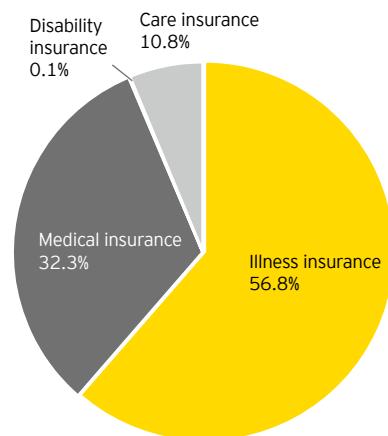
China's **medium-** and **low-end** medical insurance is subject to fierce competition between traditional life insurance companies and property insurance companies. At the same time, internet giants are also taking the field with a series of innovative new products. For example, the "million coverage medical insurance"<sup>2</sup> products have evolved rapidly to include value-added health services, an optimized claims experience, and personalized coverage for those with pre-existing conditions. Such products have low premiums, a high insured amount and a high proportion of claims, but the majority are one-year products without guarantee of renewal. As medical technologies become more sophisticated, detection rates and cure rates will improve, requiring more product innovation in the future.

**Figure 20: The original premium income and growth by insurance type in 2017**



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

**Figure 21: The original premium income structure by insurance type in 2017**



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

### Care insurance

This has the smallest share in the market, accounting for just 10.8%, down 19.1 percentage points year-on-year.

1 "Statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

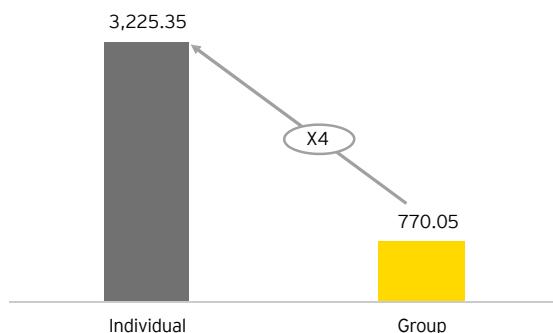
2 "Million coverage medical insurance", a short term of medical insurance products with coverage of more than RMB 1 million

## Long-term vs. short-term coverage

Long-term insurance dominates the market, especially the rationed payment type of long-term critical illness insurance. This type of insurance has little correlation with medical supply, with similar characteristics to a life insurance product.

In 2017, long-term insurance premiums totaled RMB 309.527 billion, accounting for 70.5%; while short-term insurance premiums totaled RMB 129.519 billion, or 29.5% of the market.<sup>1</sup> However, long-term premiums suffered a big fall during 2017, when the regulator suspended short- and medium-term care insurance.

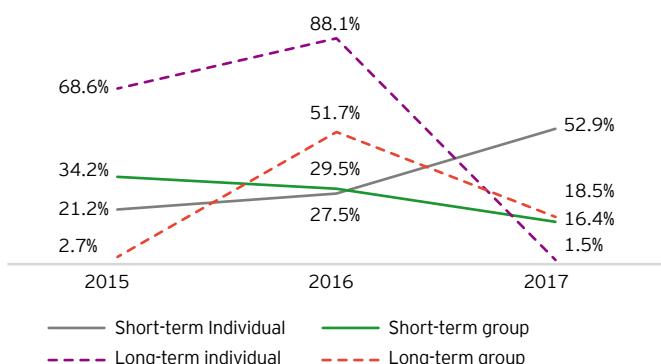
**Figure 22: Individual and group health insurance premiums for life insurance companies in 2017 (in RMB 100 million)**



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

Similar to life insurance, in 2017, medical insurance premium income from individual customers was four times that from groups. Due to risk allocation and the high bargaining power of companies, the average unit price per customer of group insurance is much lower than that for individuals. In addition, the growth rate of short-term individual insurance has increased steadily to 52.9% in 2017, while the growth rate of short-term group insurance has decreased year-on-year to 16.4%.<sup>1</sup>

**Figure 23: The growth rate of health insurance premiums for life insurance companies during 2015-2017**



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

## The health insurance market is highly concentrated and dominated by Chinese-funded life insurance companies

In China, health insurance is currently sold through life or property insurance companies, with life insurers taking the major share of the market. In 2017, health insurance accounted for 18.6% of life insurance revenues and was the main driver of business growth. Although property insurers are growing their health insurance businesses, these products only accounted for 3.7% of total revenues in 2017.

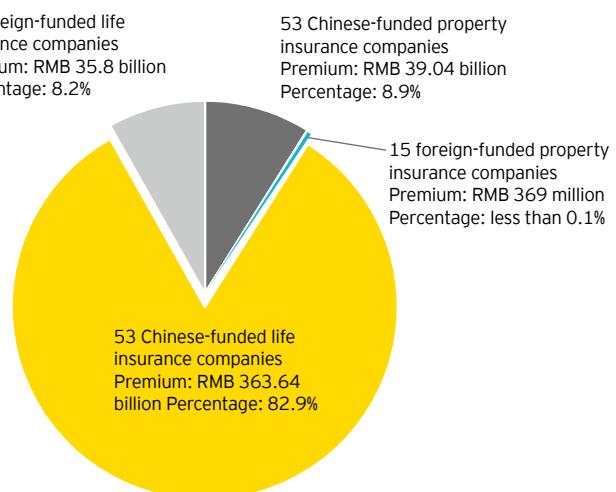
**Life insurance share of the total health insurance premium income in 2017**

Long-term health insurance	91.1%
Short-term health insurance	69.6%

Life companies hold market share for two reasons:

- ▶ **Regulation:** property insurance companies are prevented from selling long-term health insurance. The short-term products they are allowed to deal in generally have a unit price lower than long-term insurance products.
- ▶ **Customer base:** life insurance companies already have an established foundation from which to sell personal-related insurance, so it is easier for them to build professional health insurance platforms. Whereas it is costly and difficult for property insurance companies to develop such businesses.<sup>1</sup>

**Figure 24: Health insurance premiums and percentages of various insurance companies in 2017**



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

<sup>1</sup> "Statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

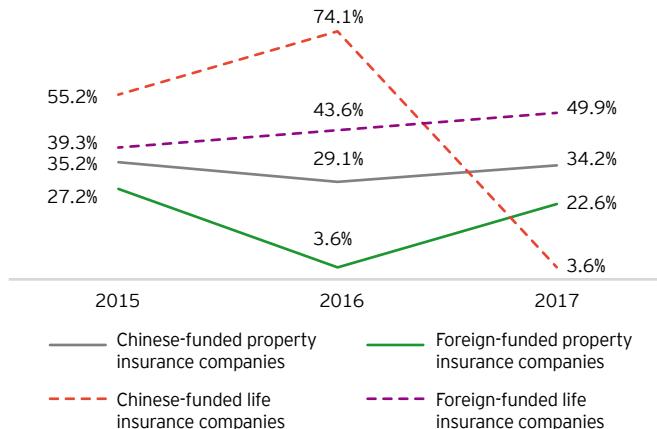
## Although the market share of foreign-funded companies is less than that of Chinese-funded companies, their growth momentum is building

Foreign-funded companies are generally subject to regulatory restrictions around business locations and cannot reach all customers – and even Sino-foreign joint ventures encounter difficulties. Despite these challenges, the health insurance business of foreign-funded companies are growing strongly.

### Premium income is highly concentrated

In 2017, 80% of premium income of the overall health insurance market was derived from 8% of companies. The insurance companies can be divided into four echelons by premium income.

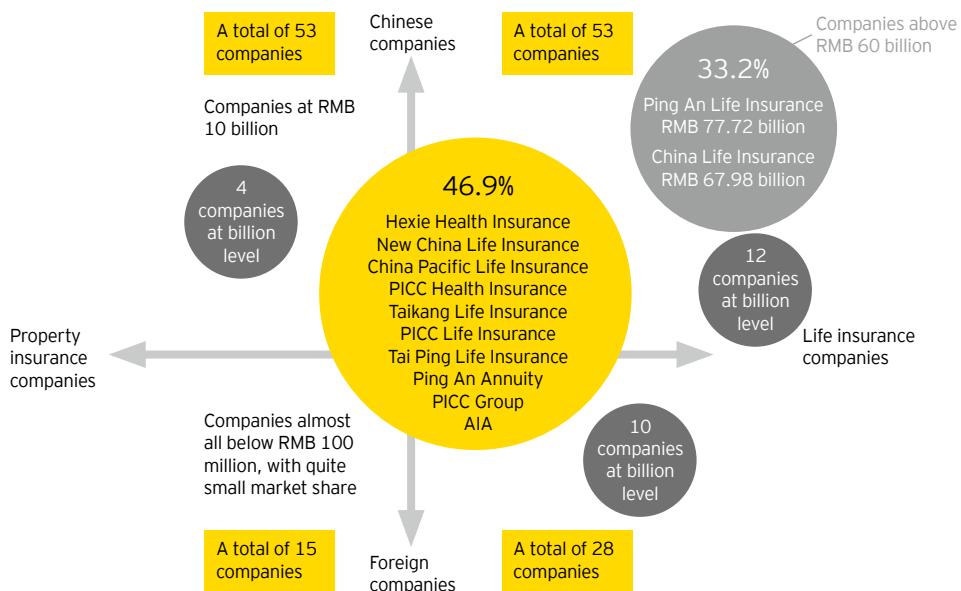
Figure 25: Growth rate of health insurance premiums for differently funded insurance companies 2015-17



Source: Data from industry research

Echelon	Number of companies	Premium income	Market	Life insurance	Property insurance
<b>First echelon</b> premium income > RMB 60 billion	2	RMB 145.71 billion	33.2%	Ping An Life Insurance China Life Insurance Both Chinese-funded	
<b>Second echelon</b> premium income at RMB 10 billion	10	RMB 206.23 billion	46.9%	8 Chinese-funded companies (e.g., Hexie Health Insurance and New China Life Insurance) 1 foreign-funded life insurance company (AIA)	1 Chinese-funded company (PICC Group)
<b>Third echelon</b> premium income at RMB 1 billion	26	RMB 67.87 billion	15.5%	12 Chinese-funded companies 10 foreign-funded companies	4 Chinese-funded companies
<b>Fourth echelon</b>	111	RMB 19.136 billion	4.4%		

Figure 26: Market concentration of health insurance companies



### A diverse range of cross-sector companies are entering the health insurance market

In 2017, 149 companies operated health insurance businesses in China, 12 more than in 2016 and 23 more than in 2015. Currently, China has seven dedicated health insurance companies: PICC Health Insurance, Ping An Health Insurance, Hexie Health Insurance, CPIC Allianz Health Insurance, Kunlun Health Insurance, Fosun United Health Insurance and Ruihua Health Assurance.

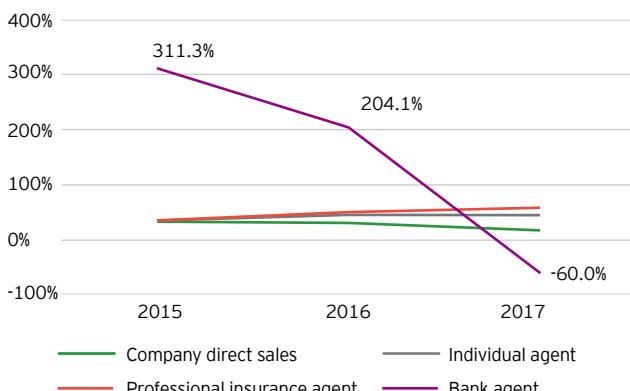
Rather than just being pure insurance players, these companies are evolving towards tech giants, medical institutions, pharmaceutical groups, health management institutions, and big data companies.

## Traditional sales channels remain focused on individual agents, but internet sales are growing rapidly

With the suspension of the short- and medium-term care insurance reducing sales through banks, individual agents account for the vast majority of health insurance sales. In general, given the complicated insurance clauses and high average premium per policy of long-term health insurance, consumers prefer to hear about products from acquaintances or professional insurance agents before deciding on which policy to purchase.

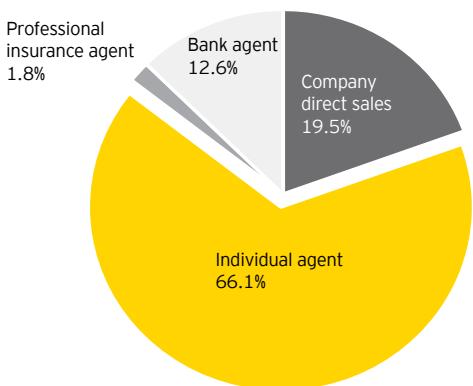
Individual agents are also the traditional channel for life insurance companies, making this a familiar model for incumbents that are used to getting their greatest percentage of premium income from individual agent channels. In 2017, total premium income from this channel reached RMB 251.12 billion, accounting for 66.1%. This was 3.4 times the premium income from direct sales, the next most successful channel.<sup>1</sup> To drive premium growth, companies have launched internet channels running in parallel with their traditional sales structure.

Figure 27: The growth rate of health insurance premium for life insurance companies by channels during 2015-17



Source: "statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

Figure 28: The health insurance premium structure of life insurance companies by channel in 2017



Source: Data from industry research

## Internet channels are developing rapidly. Third-party platforms with high internet traffic have become the battleground for insurance companies

The ubiquity, far-reaching and transparency of the internet make it an excellent channel for low-cost, short-term health insurance, which is easy for consumers to understand. Fierce competition is ramping up in this channel, generating strong premium growth.

In contrast, as a more complex and expensive product, long-term health insurance is struggling to gain traction online. Mobile apps only offer limited information on these complicated products making it hard for consumers to be confident that they are making the right purchasing decision. To overcome this, some companies have started trying to get closer to customers through live streaming videos, which can improve customer understanding and build trust.

The growth of online health insurance premiums is being accelerated by the highly popular "million coverage medical insurance" products, which are largely sold through internet channels. According to the Insurance Association of China, health insurance premiums from internet channels more than doubled in the first half of 2017, reaching RMB 2.91 billion in the first-year premium (FYP). Of this, life insurance companies accounted for RMB 1.24 billion through their own online sales platforms, tripled the premiums sold online in the previous year. Cancer prevention insurance was the fastest growing product, nearly 10 times higher than in the previous year, followed by care insurance and critical illness insurance growing at 874% and 245% respectively.<sup>2</sup>

The channel structure of internet insurance focuses on third-party platforms supplemented by official websites. In the first half of 2017, third-party platforms accounted for 92% of life insurance premiums, totaling RMB 92.99 billion.<sup>2</sup> However, the rapid development potential of websites should not be underestimated.

Insurance companies and the third-party platforms cooperate in two models:

- 1. Off-the-shelf:** Insurance companies provide products to third-party platforms, paying a channel fee based on sales. This model has relatively low connection costs and conversion rates.
- 2. Scenario-based:** Insurance companies embed insurance sales into the service scenarios of third-party platforms, paying a conversion channel fee based on the marketing and sales conditions. Despite the higher connection cost, this more targeted model generates a higher conversion rate.

1 "Statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

2 "Search", Insurance Association of China, <http://www.iachina.cn/>, 11 April 2018

## Insurance companies play an important social roles in supporting public health insurance

Led by government, insurance companies have increasingly participated in the provision of public health insurance, with their role shifting from traditional commercial insurance providers to being an important stakeholder in public health insurance.

Currently, insurance companies assume three roles in public health insurance:<sup>1</sup>

Undertake the serious illness medical insurance business for urban and rural residents

In 2015, the General Office of the State Council began promoting the full implementation of serious illness medical insurance. This included introducing incentives for commercial insurance institutions to undertake serious illness medical insurance, and further regulating how procedures are commissioned and allocated.

At the end of 2017, 16 insurance companies had provided serious illness medical insurance in 30 provinces (autonomous regions and municipalities directly under the Central Government) across the country, covering 1.05 billion urban and rural residents.

Handle various types of national medical insurance services

The insurance industry was commissioned to manage national medical insurance fund, which accumulated RMB 86 billion from 2010 to the end of September 2015.

Explore new approaches to serve medical reform

Commercial health insurance companies actively invest in social medical institutions to improve social medical condition. They also play a certain role in strengthening medical control and reducing unreasonable medical expenses.

"In recent years, we have adopted some innovative approaches for institutions combining the basic public health care scheme with commercial insurance policies, and using economies of scale to amplify the capital effects and make more people benefit from the serious illness medical insurance program.

More than 17 million people have been covered by the serious illness medical insurance program last year. More efforts will be adopted in this respect and this year, the central government subsidies for basic public health care scheme will be raised. Half of the increase will be spent for serious illness medical insurance program, enabling more serious illnesses to be covered, benefiting more than 20 million people."

*Li Keqiang*

*Premier of the State Council  
Press conference for the first session of the 13th National People's Congress*

## Internal pain points for health insurers

Although China's health insurance industry has developed rapidly, with more and more players entering the market, many are struggling to achieve profitability.

To achieve long-term sustainability, health insurers must address pain points in their: products, channels, operations, risk control, people, data and systems.

### **Product differentiation - the evolution of health insurance products out of life insurance operations means most current products are extremely similar**

In 2017, life insurers generated 91.1% of the total health insurance premium income.<sup>1</sup> To help life insurance customers accept health insurance, a large proportion of long-term health insurance products were created with life insurance-style terms or products. This is especially true of long-term critical illness insurance products, which account for 56.8% of premiums, having both a health insurance component and a savings component.<sup>1</sup>

As a result, health insurance products from different companies are highly similar. Unless products are differentiated through personalization or risk-based pricing, the market is in danger of commoditizing. The industry needs to look at innovating product design to create value-added health insurance services that improve profitability.

### **Channels - high development and usage costs**

Most insurance companies are putting health insurance sales through their traditional offline channels, which have relatively high development and usage costs, especially for small companies. Even internet channels have higher costs than in the past.

Many companies also lack sales models that enable them to gather the detailed customer information required to offer personalized products, offer scenario-based insurance or provide a quality customer experience to maximize value.

### **Operations - little specialization and high costs**

Most insurance companies have yet to separate their health insurance operations from their life or property insurance models, which do not match the business characteristics of health insurance. Without a dedicated health insurance business, insurers will struggle to control operating costs or create targeted customer experiences. To develop a successful health insurance business, companies need an independent, end-to-end operating model.

### **Risk control - need for specialist expertise**

Effective risk control is the key to profitable health insurance, requiring very different approaches to those used by life and property insurance underwriters and claim adjusters. The funding structure and lifecycle of health insurance risk have specific characteristics that require different actuarial methodologies for calculating risk.

"China's commercial health insurance market faces many challenges. However, providers willing to harness insurance technologies to customize health insurance products and create affordable pricing models will have huge opportunities to meet market demand and create highly profitable business models."

*Bonny Fu*

*Actuarial and Insurance Risk Partner  
Ernst & Young (China) Advisory Limited*

**Figure 29: Insurers' internal operation pain points on health insurance**



### **People - talent, training and culture**

Health insurance companies often lack skills in health care, internet marketing and new technologies. Companies need to recruit or train for this expertise, as well as building a more innovative and entrepreneurial culture to support rapid business growth. This will require a flatter, more agile organizational structure to support constant innovation and quick decision-making.

### **Data - incomplete health data**

Insurance groups have insufficient data sharing with life and property insurances. They cannot extract health data from customer information, and do not have data analysis and decision-making systems to facilitate business growth.

### **Systems - lack of specialization, scalability and flexibility**

Most insurance companies have no separate systems to support health insurance operations, instead putting these products into the core systems of traditional life or property insurance business models. However, these legacy systems with outdated architectures cannot keep up with the swiftly changing demands of the health insurance market, which requires agile and integrated business processes.

<sup>1</sup> "Statistic data," China Insurance Regulatory Commission, <http://bxjg.circ.gov.cn/web/site0/>, 10 April 2018

## External pain points for health insurers

To control costs, enhance customer loyalty, accumulate health data and make differential pricing, insurance companies, as payers, are starting to converge with medical service providers, pharmaceutical companies and health service providers in four models.

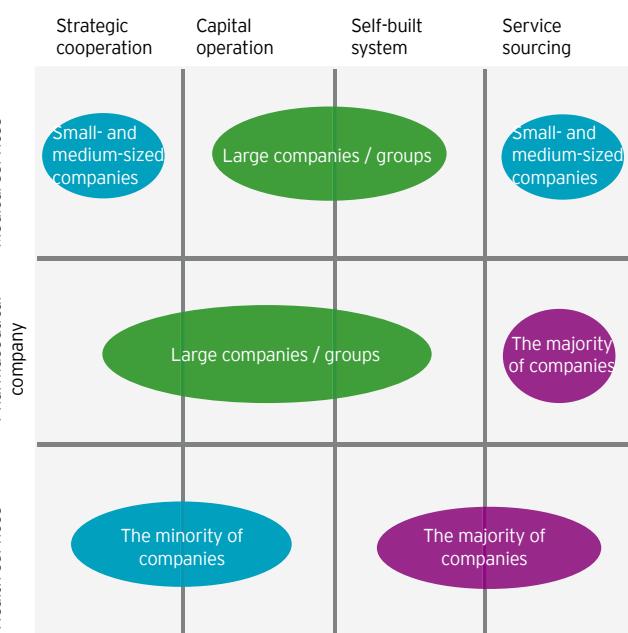
### Different features of the four models

Name	Description	Strengths	Weaknesses
Strategic cooperation	Both parties cooperate extensively for their long-term mutual benefit.	Relatively low costs	Weak cost control Unclear content Uncertain results Low threshold
Capital operation	Uses market rules to increase value and benefit through capital investment and cooperation.	Certainty over cost control High threshold	High cost Less targeted Uncertain return on assets (ROA)
Self-built system	An enterprise applies its own resources to play to its strengths.	Highest threshold Strongest cost control	Slow results, requiring time investment Uncertain ROA
Service sourcing	An enterprise purchases or exchanges services from another enterprise and provides these services to its own customers.	Fast results Lowest cost Wide range of service providers as options	No power over cost control

### How companies use the four models

- ▶ **Large insurance groups** invest in self-built systems or capital operation to control high-end medical resources.
- ▶ **Small- and medium-sized insurance companies** tend to cooperate with hospitals in niche areas (e.g., International department).
- ▶ **Pharmaceutical companies** mostly cooperate with third-party pharmaceutical distributors, or target segmented, scarce and high-end pharmaceuticals (e.g., diabetes).
- ▶ **Health services** usually build platforms by themselves or connect with the third-party TPA.<sup>1</sup>

Figure 30: Health ecological convergence models of insurance companies



### Difficulty in offering value-adding health care services to medium and high-end health insurance products

For medium- and high-end health insurance products, the market has real potential to add value with extras, such as express channel, physical examination services, medical treatment all around China, overseas medical treatment, online consultations and gene detection or wearables.

These value-added services have many advantages, including helping to: attract high-quality target customers, enhance customer loyalty and extract health information to differentiate the service experience.

However, introducing value-added health care services come with their own challenges, including:

- ▶ Increase in operational expenses
- ▶ Homogenization of services given the limited number of source providers
- ▶ Difficulty in linking health services with insurance products and services and getting maximum value from customer data
- ▶ Customer health management subject to weak compliance, making it difficult to control risk

<sup>1</sup> TPA is the abbreviation of Third-Party Administrator for Group Medical Insurance. It is a company providing the third-party management services to health insurance companies or insurers that operate medical insurance, especially medical expense insurance business, within the health care industry. It provides new contract and security services, processes claims, offers customer services and medical service organization network, arranges medical expense settlement services and so on.

## **Operating pain points generated from interactions between insurance companies, medical and health service providers**

### **Data**

In health insurance, rate determination, product design, risk control and process optimization are all supported by data, which comes from multiple sources, including: insurers' customer records, personal information provided by customers, resources from public and private hospitals, health platforms and pharmaceutical enterprises. However, it is difficult to share and use all of this data due to:

#### ► Reluctance to share data

Public hospitals are often reluctant to cooperate with insurers, other than to provide financial data to facilitate claims. Insurers have limited bargaining power to obtain diagnosis, treatment or other key health data from hospitals. As a pure payer, without access to medical outcomes data, the insurer can't judge whether the payment is reasonable or augment the corresponding services with risk control strategies. Other data providers are slightly better than public hospitals in terms of data sharing, but the data provided is relatively fragmented and one-sided, making it hard for insurers to find a sustainable and effective source of health data.

#### ► No common standards

Data providers, such as insurance companies, hospitals, pharmaceutical enterprises and health management institutions, have their own data standards. Even if entities were willing to share data, differences in data definition and data format make it hard to use imported data from another organization. Effective integration will require better data governance, processing labeling and analysis. While this will be time consuming to achieve, it will help insurers to build competitive advantage.

#### ► Data security yet to be standardized

In China, health-related information legislations are yet to be rolled out, so companies set their own rules for managing data privacy and security. For example, restrictions on transmitting customer data to a third party is based on a company's own internal controls and sense of corporate responsibility. This leaves the door open for health care companies to actively or passively abuse, or even buy or sell customers' health data. The industry must strive to keep health data secure and use it ethically to protect its reputation.

### **Systems**

#### ► Legacy systems prevent integration and scalability

Real-time, or close to real-time information will be key to improving customer service and supporting product innovation in health insurance. But insurers' legacy systems are not capable of integrating with those in the broader

health ecosystem, including: hospital HIS systems, health management systems for health services, medical insurance or social insurance systems, and wearables. Insurers must not only be able to connect with and share data, but also flex and respond quickly at the application level. Insurers need core infrastructure with high availability, flexibility, scalability and strong integration capabilities. At present, many companies still have a health insurance business system embedded in traditional life and property insurance systems, maintained by putting in patches. Health insurance needs dedicated systems that can respond quickly to future marketplace changes.

#### ► Connecting with hospital systems is challenging

It is difficult for insurers to get access to data from public hospitals, which are reluctant to invest in the financial and human resources required to connect with either insurers or other public hospitals. Even if hospitals were willing to share data, HIS systems differ from hospital to hospital and often lack a strong internet connection.

#### ► Health ecosystem connectivity is still in its early stages of development

A number of health service providers operate their own separate systems, requiring insurance companies to find a way to connect with them one by one. This is extremely expensive and inefficient in a "many-to-many" market. The industry needs platform companies to connect insurance companies and health service providers. However, platform construction is currently in development, and most companies are small and lack funding. Their main revenues come from providing low-margin physical examination or other health-related services. Connectivity needs to improve substantially for the ecosystem to operate effectively.

### **Ecosystem management**

#### ► No standardized management platforms for health service providers

Although most insurers set up health management departments for their health service network, the majority are incapable of managing service providers consistently, and have no means of monitoring customer feedback on the service they receive from third-party providers.

#### ► Relatively low protection from insurer, and little bargaining power over medical service providers

The overall protection from insurer is still low from both medical insurance or insurance companies while deductible is high. Unlike in other jurisdictions, where insurers are important customers of hospitals, in China, insurance companies bring limited numbers of patients to medical service providers. They have little bargaining power to gain the cooperation of hospital management.

#### ► Unaligned benefits between the payer and the service provider

Payers and service providers need to find a win-win model that delivers mutual benefits: Lower costs for the payer, and scale and enhance earnings for the service provider.

## Analysis of health insurance regulation environment

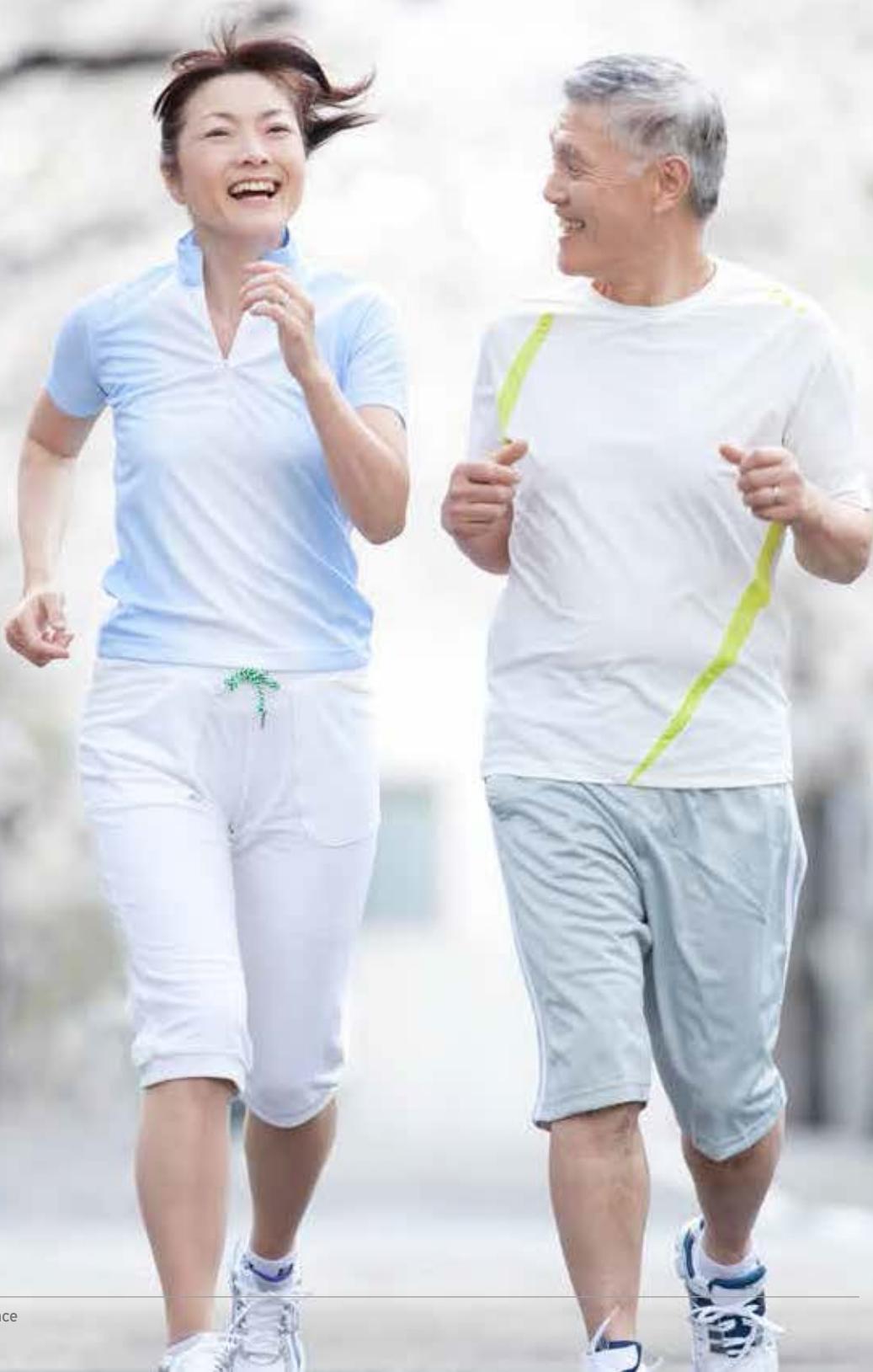
The government has a strong focus on national health insurance, formulating strategic plans and guidelines, establishing a comprehensive commercial health insurance regulation system, and further advancing the implementation of "Healthy China" and "Digital China" national strategies.

	Highlights	Meaning
<b>State Council</b> Several Opinions of the General Office of the State Council on accelerating the development of commercial health insurance (As stated in General Office of the State Council [2014] No.50)	<ul style="list-style-type: none"><li>▶ Specify that commercial health insurance will play an important role in the establishment of multi-level medical security system in China</li><li>▶ Reduce the individual medical expenditure, reduce the financial medical security expenditure, strengthen the medical risk control, reduce medical expenses and increase medical service resources</li></ul>	
<b>State Council</b> Outline of the Plan for "Healthy China 2030"	<ul style="list-style-type: none"><li>▶ Support the medium- and long-term health strategic plan proposed at the State level for the first time</li><li>▶ Deepen the medical system reform by improving the national medical security system; Strengthen the consolidation and connection of various medical systems, improve medical security management service system and achieve the long-term sustainability of security capabilities</li></ul>	
<b>State Council</b> Circular of the State Council on Issuing the 13th five year plan for deepening the medical and health system reform (As stated in General Office of the State Council [2016] No. 78)	<ul style="list-style-type: none"><li>▶ Drive the development of commercial health insurance; Actively develop the strengths of commercial health insurance institutions in actuary, professional services, risk management and other areas, encourage and support them to participate in medical insurance, forming a new landscape with diversified and multi-party competition</li><li>▶ Make the most of the advantages of long-term investment of commercial health insurance funds</li><li>▶ Guide commercial insurance institutions to set up medical, elderly care, physical examination institutions and other health services institutions</li></ul>	Strategic guidance
<b>State Council</b> Opinions of the General Office of the State Council on the comprehensive implementation of the critical illness insurance for urban and rural residents (As stated in General Office of the State Council [2015] No.57)	<ul style="list-style-type: none"><li>▶ Further enhance the security level on critical illness</li><li>▶ Strengthen the coordination and linkage among basic medical insurance, critical illness insurance, medical assistance, disease emergency assistance, commercial health insurance, charity aid and other systems, and forming joint security forces</li><li>▶ Further regulate the services provided for critical illness insurance</li><li>▶ Strengthen the policy support for commercial insurance institutions to undertake critical illness insurance</li><li>▶ Emphasize the regulation of medical service behaviors</li></ul>	

	Highlights	Meaning
<b>China Insurance Regulatory Commission (CIRC)</b> Administrative Measures for Health Insurance (Government consultation paper)	<ul style="list-style-type: none"> <li>▶ Encourage health insurance products to combine with health management services</li> <li>▶ Encourage medical insurance to play an active role on medical expenses and risk control</li> <li>▶ Encourage insurance companies to share information and data with medical institutions, and basic medical insurance departments</li> </ul>	Standard operation
<b>State Council</b> Opinions of the General Office of the State Council on encouraging social forces to provide multi-layered and diverse healthcare services (As stated in General Office of the State Council [2017] No.44)	<ul style="list-style-type: none"> <li>▶ Encourage solid partnerships to be built between clinics, hospitals and commercial insurance institutions, aiming to create a medical consortium</li> <li>▶ Encourage the market to build a mechanism connecting the information of insurance companies engaging in commercial health insurances with that of privately-invested medical institutions</li> <li>▶ Encourage commercial insurance institutions and health management institutions, medical institutions to jointly develop insurance products</li> <li>▶ Accelerate the development of medical practice insurances in the form of medical liability insurance and medical accident insurance</li> </ul>	Ecological linkage
<b>Ministry of Finance, State Administration of Taxation and CIRC</b> circular on promoting the pilot policies for individual income tax on commercial health insurance nationwide (As stated in Ministry of Finance and State Administration of Taxation [2017] No.39)	<ul style="list-style-type: none"> <li>▶ Expenses for purchasing qualifying commercial health insurance products by individuals in 31 pilot cities across the country are deductible before tax to the extent of certain amount from 1 January 2016</li> <li>▶ Pilot policies for individual income tax on commercial health insurance shall be promoted nationwide from 1 July 2017</li> <li>▶ A health insurance product subject to preferential individual tax applies the method of universal life insurance, including medical insurance liability and individual account accumulation liability</li> </ul>	Tax incentives
<b>State Council</b> Opinions on propelling the development of "internet plus health care" (As stated in General Office of the State Council [2018] No.26)	<ul style="list-style-type: none"> <li>▶ Promote the deeply integrative development of internet and health care, and encourage innovation and inclusive and prudential supervision</li> <li>▶ Encourage medical institutions to apply "internet+" to optimize the existing medical services</li> <li>▶ Promote the deep integration of internet and health care, expand service scope and enrich the service supply</li> </ul>	Digital technology
<b>National Health Commission (NHC)</b> Establishment of three national health care big data groups	<ul style="list-style-type: none"> <li>▶ The three groups are led and organized by the NHC, uniformly supervised by the National Health Care Big Data Security Administration Commission, and taken as an important practice of the national big data strategic layout</li> <li>▶ Make new contributions to promote the deepening of superior medical resources to the entire population, deepen medical reform, and drive the development of health industrial chains</li> </ul>	

# IV

## The future: emerging trends in China's commercial health insurance market



## Future trends in China's health insurance market

Taking into account the government's strategies, the above research into customer needs and the market's current pain points, we believe success in China's health insurance market will depend on companies: focusing on the customer, establishing dedicated operations with new business models, investing in emerging technologies and collaborating with the broader ecosystem.

### Health insurance will gradually move towards a closed-loop model with a focus on meeting the medical needs of individual customers on a family basis

Health insurance is usually a family-based purchase, with customers often buying policies for a family member or sharing their existing policy with others in their family. Therefore, health insurance products should be designed on a family basis and focused on family members, providing comprehensive services from financial compensation to health care management, protecting family members from health risks.

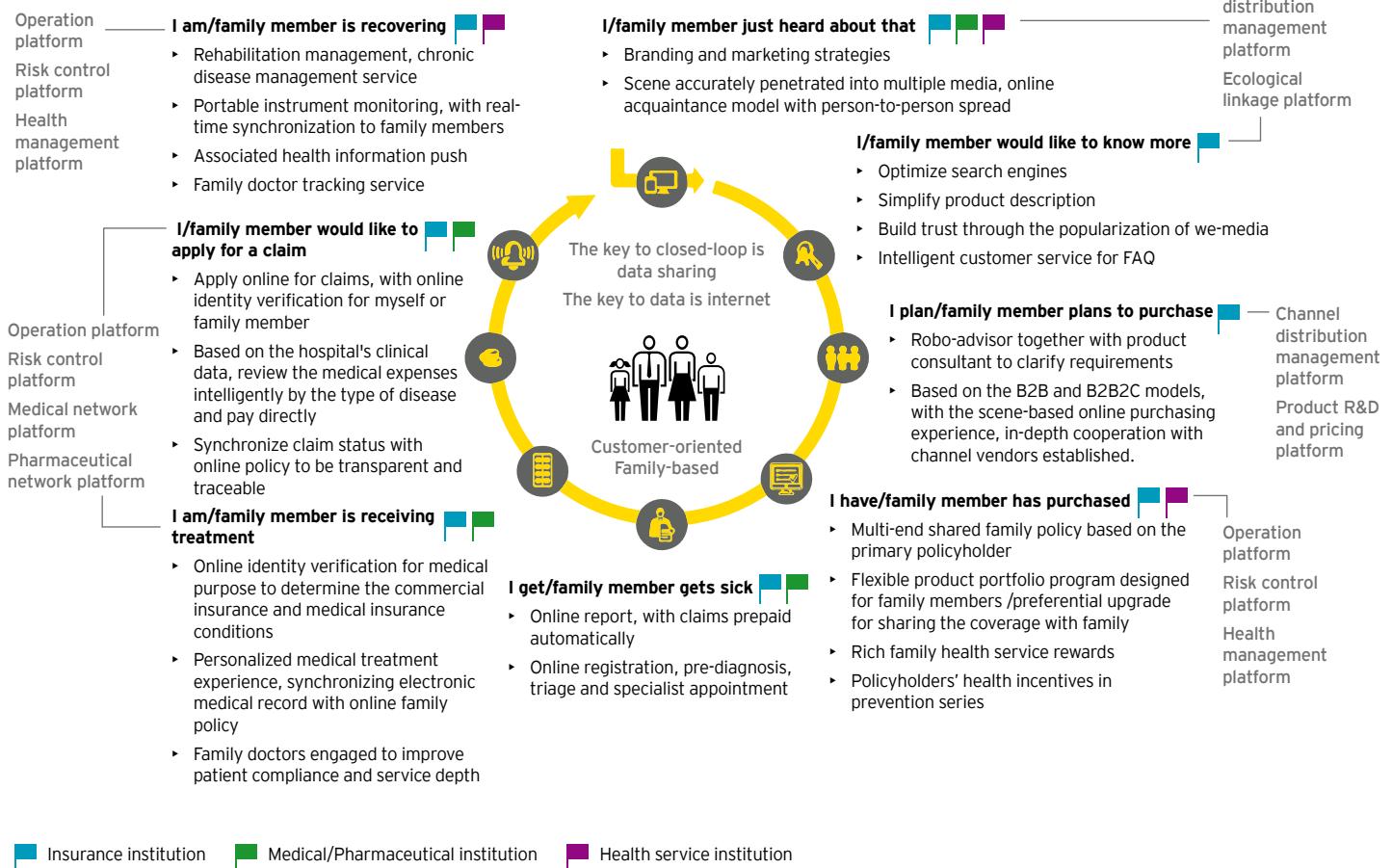
To provide customers with valuable services, insurers must accurately understand customer needs and build capabilities to engage with customers across all aspects of the health service life cycle.

"With the people's growing demands for a better life and the deepening of medical reform, the domestic health insurance market has a significant opportunity for growth. To succeed, insurance companies need to: create a clearly defined strategic positioning based on differentiation, establish an ecosystem business model and harness technology to drive innovation."

*Toby Zhang*

*Financial Services Strategy Advisory Leader  
Ernst & Young (China) Advisory Limited*

Figure 31: Customer-oriented and family-based health insurance ecosystem closed-loop model



Health insurance will shift from the traditional property and life insurance business model to a dedicated and data-driven ecosystem model.

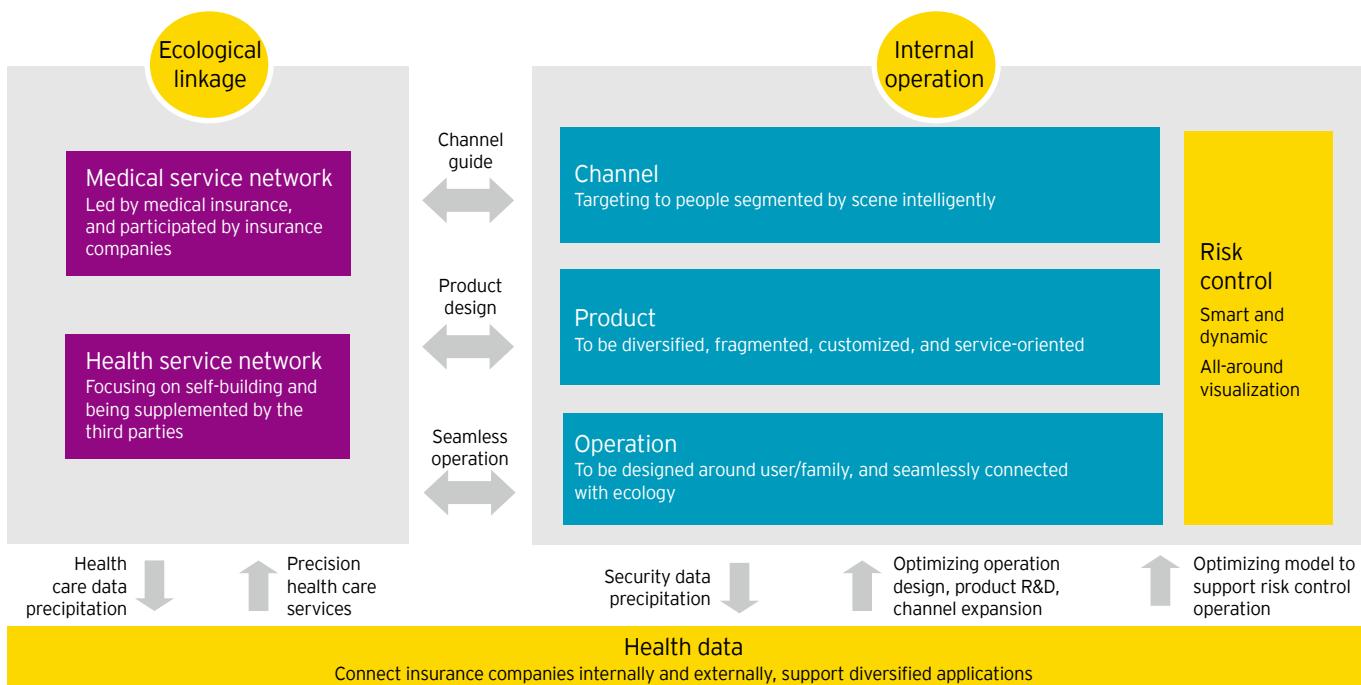
Health insurance platforms should be capable of both linking the entire "MIPH" ecosystem and supporting highly efficient internal operations. New, specialist capabilities will be required in customer insight, product research and development, channel management, operational design and risk control. At the same time, customer health data platforms with internal and external connections will help health insurers to make data-driven decisions.

"The closed-loop model of health insurance services depends on the joint efforts of insurance companies, medical service institution, pharmaceutical companies and health service companies. However, due to the significant differences between insurance and health industries in terms of specialty and operating environment, they are still in an early stage of interaction. The entire process of integration development will be longer and more complex than previously imagined."

*Zhou Qing*

*Board Secretary and General Manager of Strategic Development Department  
CPIC Allianz Health Insurance Co. Ltd.*

Figure 32: Health insurance platform



## **Efficient cooperation between payers and service providers is the key to developing a closed-loop health insurance services model**

Developing a closed-loop health insurance services model will require the joint efforts of insurance companies, hospitals, pharmaceutical companies and health service companies to achieve data connection, system connection and customer connection, and leverage synergies. By cooperating with the medical and health service networks, the payer (insurance company) may not only guarantee the quality and effectiveness of medical and health services but also control medical and health expenditure costs. Meanwhile, the service providers (medical and health service networks) may work with commercial insurance companies to enhance the customer experience, disperse medical risks, ease doctor-patient relationships, optimize income structure and boost the motivation of doctors.

### **The collaboration of commercial health insurance and the government's medical insurance, subject to local requirements, is vital to achieve mutual benefits. New entrants should actively cooperate with relevant government departments to participate in medical system reform**

China's medical payers and service providers are dominated by the public system and supplemented by the private system. The establishment of the State Medical Security Administration will centrally unify the power of the payer and the service provider, demonstrating the government's determination to strengthen the health care system. Based on the present situation of mainland China, it is difficult for insurance companies to penetrate the service provision market on their own. They should actively cooperate with relevant government departments to participate in medical insurance business and pharmaceutical reform.

In mainland China, medical insurance has wide coverage yet significant regional differences. Commercial insurance companies can cooperate with local medical insurance institutions to help cut costs and standardize the management. In some areas, the personal account balance of a medicare card can now be used to purchase commercial health insurance. This is an important attempt to combine medical insurance with commercial insurance in the future.

The financing model for public hospitals is by and large from government subsidies, and is thus restricted to have social capital self-funding or to enter into joint ventures with the private sector. This has created inefficiencies in hospitals and detracted them from their social responsibilities. This creates an opportunity for insurance companies. Starting from some diseases, commercial insurance companies can collaborate with public hospitals to reduce medical costs and improve their income structure while ensuring the quality of medical services.

## **Future trends in health insurance technology**

### **Data-driven, internal and external connection**

Data is the life blood of health insurance. It plays a significant role in: customer experience, channel expansion, precision marketing, differentiated services, product design, actuarial pricing, operational optimization, risk control, and medical and health network management. Insurers need a health data platform that connects with the insurance enterprise data paths, integrates external data and supports diversified applications.

### **Segmentation, swiftness and flexibility**

The rapid development of the industry requires health insurance systems that can adapt to fast-changing scenario-based and fragmented business requirements. The new generation of health insurance systems feature micro-service architecture that enables agility. Based on the practical conditions of an enterprise's own business processes, and from the dimensions of products and business segments, the core business applications are segmented and divided. Therefore, the existing core systems are gradually transformed, to create core competencies that meet the requirements of the industry's future development.

**"The explosive development of technologies creates more possibilities for health insurance operations. The scenario-based, fragmented and intelligent health insurance business model supported by new technologies will become a trend."**

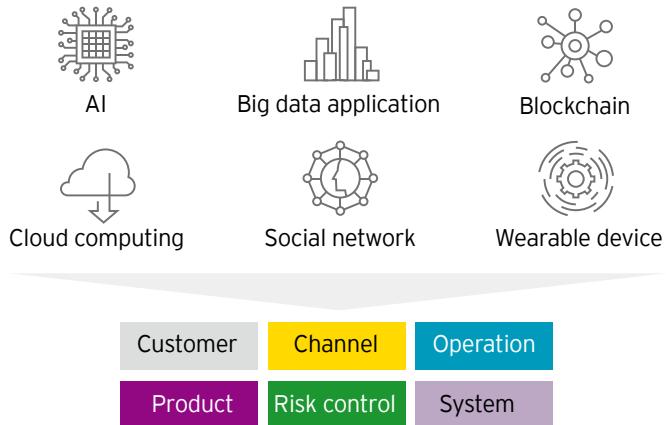
**Sanny Shen**

*Financial Services Insurance Technology Advisory Director  
Ernst & Young (China) Advisory Limited*

## Innovative technologies will enable new health insurance products and services

Emerging technologies, including AI, blockchain, big data, social network, wearable device and cloud computing, will enable the rapid development of the health insurance industry. We anticipate breakthrough developments in customer management, channels, operation, product design, risk control and system architecture using these innovative technologies.

Figure 33: Innovative technologies applied on health insurance



### AI: automated and intelligent business process

- ▶ Robotic process automation (RPA) quickly automates processes such as underwriting, claims, policy management, payment and health management services.
- ▶ Optical character recognition (OCR) technology accurately identifies health and medical-related documents, enriching industry data while improving the efficiency of business processes.
- ▶ The application of AI, including natural language processing, machine learning and deep learning, can help insurers gain new insights into customers' health, create smooth and engaging customer experiences, and provide customers with personalized and differentiated products and services.

### Big data: insight, analysis and forecasting

- ▶ Integration of intra-enterprise transaction data and external data from industry, partners and others could help identify and prevent underwriting and claim risks using analytics, improving anti-fraud capabilities.
- ▶ It allows for creation of the foundation for enterprise data and provision of data protection for AI applications, such as predictive analytic models and behavioral analysis models.

### Blockchain: A more secure, transparent and seamless data sharing and service capability

- ▶ Blockchain enables distributed storage, encryption, tamper-resistance and point-to-point transmission, ensuring the secure and efficient transmission and access of blockchain data between participating nodes. The platform also guarantees the privacy and security of customer health data.
- ▶ Blockchain-enabled smart contracts can improve efficiency and accuracy of processes that require the participation of multiple parties.

### Cloud computing: the elastic, configurable and ready-to-access infrastructure

- ▶ Realize the dynamic allocation of hardware resources on demand, make full use of the technical capabilities of service providers, improve operational efficiency and optimize operating costs.
- ▶ Access applications anytime and anywhere, enable real-time data processing to enhance service offerings.

### Social networks: Next-generation customer experience interaction platforms

- ▶ Interactive customer service platform in the form of a social network makes real-time interaction with customers possible, forming effective customer service channels, enhancing customer loyalty and improving the customer experience.
- ▶ Social networks enable public opinion monitoring, supporting brand development and crisis management.
- ▶ Combination of big data and AI, and the full use of customer data, can help brands use social networks to engage with customers at an emotional level.

### Wearable devices: Personalized products and services

- ▶ Insurers can develop personalized products and differentiated services by collecting data on a customer's vital signs and health activities. Customized services have the dual advantage of both improving customer satisfaction and reducing claims expenses.
- ▶ Wearables make it possible for insures to gain real-time customer insights, not only providing timely and accurate data for business decisions such as underwriting, pricing and claims, but also creating a more personalized customer experience.

# V

## Domestic and foreign health insurance case studies



## Ping An

Building an in-house health care ecosystem internally, developing emerging businesses and driving cooperation among subsidiaries within the group.<sup>1</sup>

In the health care ecosystem, Ping An has built a robust “patient-provider-payer” model, penetrating both the customer side and the payer side.

**Portals:** Ping An Good Doctor is China’s first online health care portal, and remains its most popular one till date, offering customers medical and health management services. Users can consult doctors for diagnosis on the app, which also provides online appointment booking. On 31 December 2017, Ping An Good Doctor had about 190 million registered users.

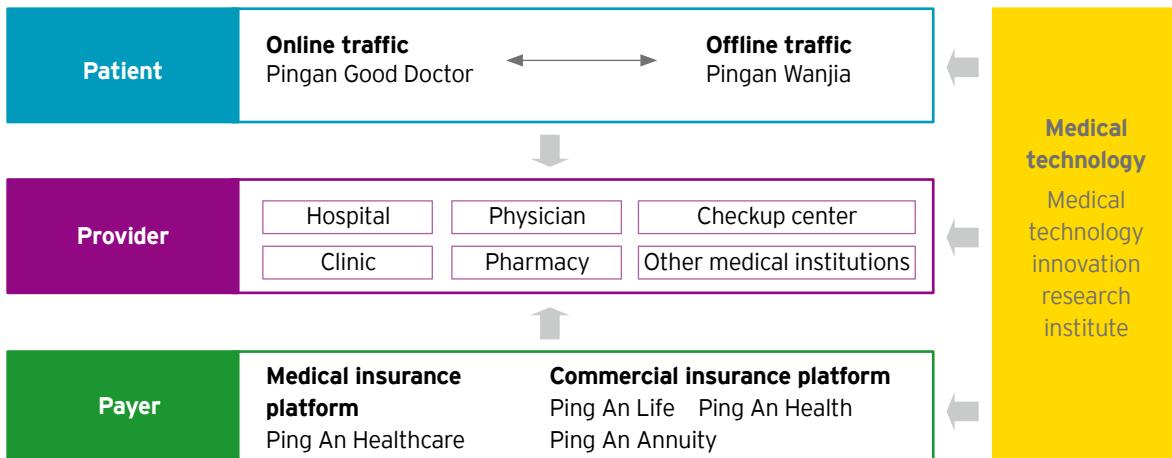
Ping An Wanjia Healthcare is China’s leading clinic management platform, helping primary medical institutions to improve their services. At the end of 2017, more than 20,000 clinics used the Ping An Wanjia Healthcare cloud platform system, with 58,000 online clinics, accounting for 34% of urban-private medical institutions.

**Ecosystem platform:** Ping An Healthcare Technology provides comprehensive smart solutions for upstream and downstream service providers in medical insurance, connecting commercial insurance and healthcare industries and their customers. It currently connects more than 2,000 hospitals and serves more than 200 cities across China, facilitating government medical insurance for hundreds of millions of people and providing cost control, account management and other services.

**Public health:** Based on its world-leading health care big data, Ping An has built systems and models to predict, prevent and control infectious, frequently-occurring and chronic diseases in cities such as Shenzhen and Chongqing.

Ping An Health is the professional health insurance subsidiary of Ping An Group, which is committed to strengthening the organic integration of health insurance products and health management services, and applying cutting-edge technologies to expedite product innovation. Its mission is to become China’s No. 1 brand for health insurance services.

Figure 34: Health care ecosystem of Ping An



<sup>1</sup> "Annual Report 2017 of Ping An," 2017, Pingan

## ZhongAn Online

Despite its small scale, this health insurance company is growing rapidly thanks to an impressive technological capability.<sup>1</sup>

**Health insurance focus:** ZhongAn's health insurance business has developed rapidly in the past two years, benefiting from the "Personal Clinic Policy" (尊享 e 生) series products. These products have seen rapid online uptake, thanks to multiple quick upgrades in line with market demand and strong publicity. The company has also had a first-mover advantage.

**Internet model:** ZhongAn uses a unique internet ecosystem partnership model, enabling it to deliver large quantities of targeted products to market segments, and deploying frequent iterations as it learns more about its customers' preferences. In 2017, ZhongAn and 307 ecosystem partners jointly provided eco-oriented insurance products, serving 432 million customers.

**Rapid development:** ZhongAn lowers risk by conducting multi-approach prototyping, where ideas fail fast and are constantly iterated. The development cycle of ZhongAn products is around 15 days, far less than the 40-60 days of traditional insurance companies. In 2017, ZhongAn's R&D investment reached RMB 518.1 million, accounting for 8.7% of its total premium. The company has a flat structure, which encourages innovation. At the end of 2017, ZhongAn had 1,385 engineers and technicians, accounting for 54.5% of its total employees, at least 5 times more than traditional insurance companies.

**Monetizing its technology developments:** ZhongAn not only applies technological capabilities to its own business, but is also developing five lines of technology solutions: insurtech, data intelligence, blockchain, fintech and health care products.

Figure 35: Premium structure of ZhongAn Online

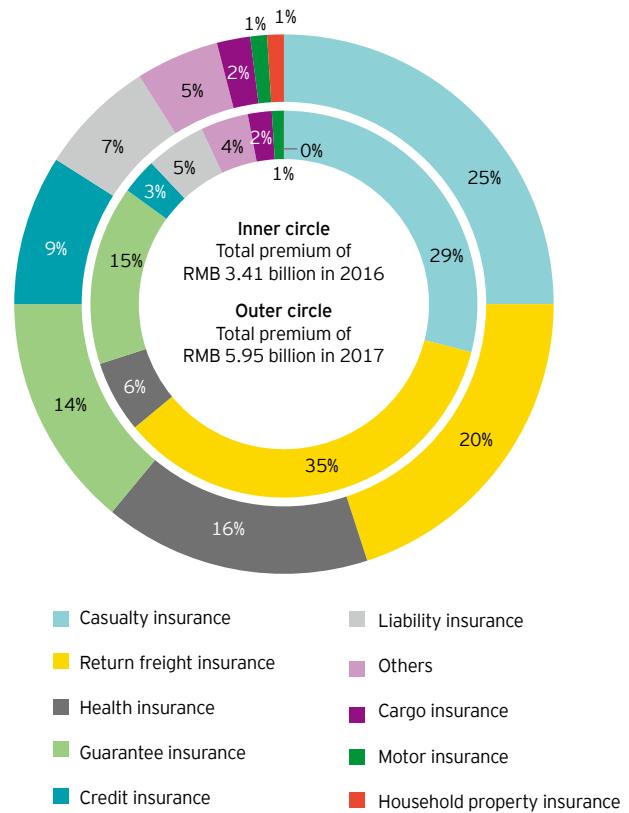
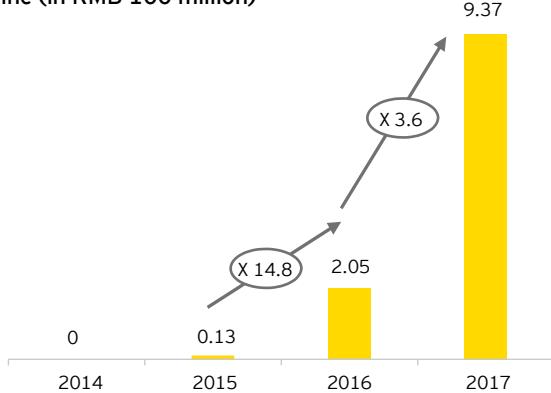


Figure 36: Health insurance premium income of ZhongAn Online (in RMB 100 million)



<sup>1</sup> "Annual Report 2017 of ZhongAn Online", 2017, ZhongAn Online

## Taikang Insurance Group

Taikang operates in three main sectors: insurance, asset management, and health and elderly care, aiming to take the “heavy asset” layout and allocation of healthcare resources around the health ecosystem.<sup>1</sup>

### Merging health and financial services

Taikang provides health and wealth services throughout one's life span through the four-in-one model: active elderly care, premier medical services, wealth management and end-of-life care.

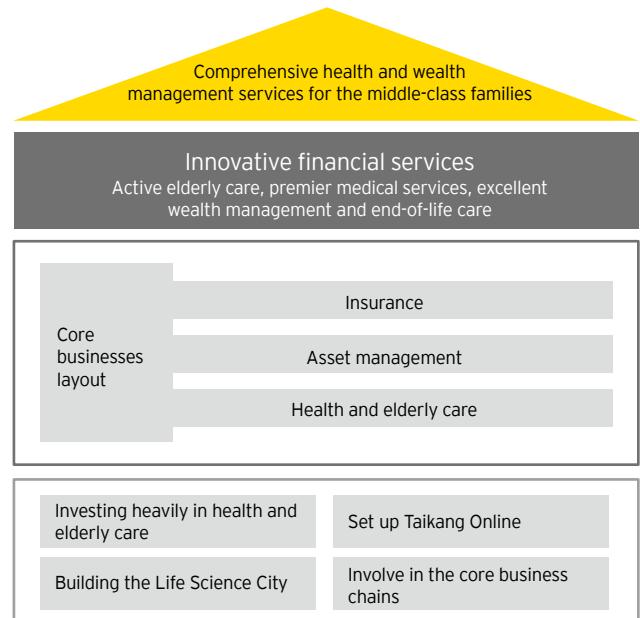
### Core businesses

- **All-round insurance:** This has a full range of individual and group insurance services through Taikang Life, Taikang Pension and Taikang Online. The company has 36 life insurance branches; more than 3,900 branches and sub-branches; and over 700,000 sales agents.
- **All-round asset management:** This includes insurance funds, third-party agency funds, enterprise annuities and personal wealth management. Taikang has assets under management of over RMB 1.2 trillion, delivering 8.26% of average annual ROI in 2007-17 for general accounts and 30.08% of ROI in 2017 for innovation-driven investment-linked accounts.
- **All-round health and elderly care:** Taikang is a leading brand in China's health and elderly care industry, offering hospital services, retirement communities, and health management in 12 cities.

### Strategy

- Invest in heavy assets in health and elderly care to build high barriers to entry
- Set up Taikang Online, and enter into the fields of internet insurance and science and technology insurance
- Build the life science city to create an all-round health and life chain with a focus on medical and life sciences

Figure 37: Taikang business layout



<sup>1</sup> "Search," Taikang Insurance Group, [www.taikang.com/](http://www.taikang.com/), 14 April 2018

## CPIC Allianz Health Insurance

A nationwide sales channel through a cooperative business model, with strong big data and technological capabilities, aiming to become the product research and development platform, operational risk control platform and health management platform of CPIC Group's commercial health insurance.<sup>1</sup>

### The current development of CPIC Allianz Health Insurance

Although CPIC Allianz Health Insurance only has branches in Shanghai, Beijing, Guangdong and Sichuan, it sells products nationwide through the distribution channels of CPIC Property Insurance and CPIC Life Insurance, as well as online channels. In 3 years, it has accumulated RMB 1.9 billion in premium income.

- **Product innovation:** The company has a customizable, modular product line that enables value adding with medical services and health management for different income customer groups.
- **Cooperative business model:** This model has integrated systems and centralized and standardized operations, using big data, AI and digital tools, such as smart compass and OCR, to improve operational efficiency and build a new type of operating service model for commercial health insurance.
- **Health management service platform:** It provides customers with health management services throughout their life cycles and builds global networks for medical services, physical examinations, dentistry and doctors.

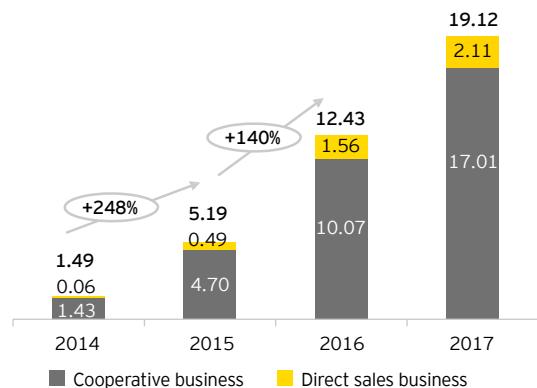
### Strategy

- Create a product system focusing on meeting the health care needs of customers
- Establish an elaborate operational risk control driven by medical big data algorithms
- Build an open health management service platform as a service portal to attract target customers

Figure 38: Organization distribution of CPIC Allianz Health Insurance



Figure 39: GWPs of CPIC Allianz Health Insurance (in RMB 100 million)



<sup>1</sup> CPIC Allianz's strategy, Board Secretary and General Manager of Strategic Development Department CPIC Allianz Health Insurance Co. Ltd., interviewed by EY, 5 May 2018.

## Kaiser permanente (KP)

This organization takes control of medical costs through its health maintenance organization (HMO) model, guides patients through the primary care physician network, connects medical and insurance data through its platform, and maintains sustainability through a physician incentive model.<sup>1</sup>

### Company introduction

KP is a good example of American integrated medical care model with more than 10 million members and 38 hospitals, mainly in California. KP's core model is to form a closed loop by integrating medical services and products, which provides both medical insurance products and hospitals for member treatment, centralizing control of cost and medical risks.

### HMO mode introduction

HMO is a form of managed care in foreign countries that builds a "closed loop" between payers and service providers. In the HMO network, the payer and the service provider agree certain discounts to offer members with a package of affordable and quality-controllable medical services. Medical care within the HMO network is offered at a relatively low price, with very low out-of-pocket expenditures required from members, who would otherwise pay much higher expenses outside the network.

### Core competences

- **Insurance companies and hospitals are integrated to control medical costs**

Because KP owns both insurance companies and hospitals, it serves both as a payer (insurance) and a service provider (hospital). More importantly, KP carefully coordinates the work done by all parties in the network, and enables it to find efficiencies that reduce costs, maintain quality and allow for innovation.

- **General practitioner triage enables high resource utilization**

A member is usually asked to choose a primary care physician as the "gate keeper." A referral from the "gate keeper" to a specialist in the HMO network is conducted through KP's internal information platform, with 75% of referrals completed in two weeks. "Gate keepers" are usually general practitioners – key players in KP's HMO plan – who prevent the abuse of medical resources.

- **Data platform connection enables cost control**

The connection of KP's medical network data platform with insurance companies makes it easier to control costs. Telemedicine and a virtual treatment portal help to connect medical and insurance data.

- **Physician incentive mechanism improves motivation**

KP insurance companies pay medical groups in a quota prepayment model, on the basis of their number of members, and share the profits and losses with these groups. Rather than increasing profitability as patient numbers go up, the medical groups have profitability tied to patient outcomes. The healthier the members are, the less the hospitals spend, the more profits the groups retain and the more income the doctors earn. With a strong emphasis on prevention, KP uses small financial incentives to reward doctors for quality performance and shares performance data to help identify ways to improve care.

<sup>1</sup> "Search," Kaiser permanente, <https://healthy.kaiserpermanente.org/>, 6 May 2018

## Oscar Health

The company uses an intelligent, light-touch medical network model to offer a high-quality online user experience and comprehensive health management.<sup>1</sup>

### Company introduction

Oscar Health is a technology-focused individual health management and insurance company founded in 2012. It mainly provides health insurance plans for individual customers, with numbers increasing from 17,000 to nearly 230,000 in 3 years. Oscar Health attracts young Americans who are not covered by health care plans through platform design, simplified products, low-cost premiums, wearable devices and online medical care. It focuses on network sales via its own platform, online advertising, social platforms and third-party price-comparison sites. Currently, Oscar Health is starting to cooperate with traditional insurance companies to expand the market.

### Core competences

#### ► Digital intelligence

A powerful digital platform supports a wide range of digital applications such as product pricing, intelligent recommendation and risk control. Based on the information provided by customers, product recommendation and pricing balance premium income and price advantages.

#### ► Medical network construction model

In its first two markets, New York and New Jersey, Oscar Health expanded rapidly by leasing other small medical service networks, freeing itself from time-consuming and labor-intensive work required to build its own in-house medical service networks. In 2015, Oscar Health used a "narrow-network" strategy to expand into Western California and Southern Texas, only using a small network of high quality providers to keep control of costs and improve efficiency.

The narrow-network strategy contrasts with the massive medical service networks of larger insurance companies, which use their wide coverage to meet diverse and decentralized customer needs. For a smaller insurance company, it can be easier and less capital-intensive to pool resources with a small number of medical service providers and offer customers lower prices and better services.

Oscar Health also delivers medical services to customers directly in California, and shares costs and profits with medical service providers rather than simply paying for the claims as traditional insurance companies do.

#### ► Quality online experience

Oscar Health's popularity and word-of-mouth referrals come in part from its quality online user experience. Oscar Health focuses on the online sales of medical insurances to individuals with simple procedures, and also offers online medical

services, such as bodybuilding and online consultations, which are popular among young individual customers. Its marketing campaign of "sports for premium discounts" enjoys a participation rate much higher than similar ones of larger insurance companies.

#### ► All-round health management

Customers use their mobile phones to search for nearby doctors and hospitals, buy common medicines and receive free online consultations around the clock.

Users can obtain rewards after completing sport goals tracked by a wearable device. The data can be used as a basis for differential pricing, and reduces the incidence of disease by encouraging healthy living.

The company provides customers with continuous health management, offering high-spending users ongoing support from nurses who remind patients to take medicines and arrange their subsequent re-examinations and related care.

Figure 40: Oscar user survey interface

The screenshot shows a user survey interface with a teal header. The text input fields contain the following information:  
My zipcode is 10012.  
I'd like to cover me.  
I'm 29 years old.  
I make \$ 20,000 yearly with 1 person in my tax household.

#### ► Breakthrough earnings

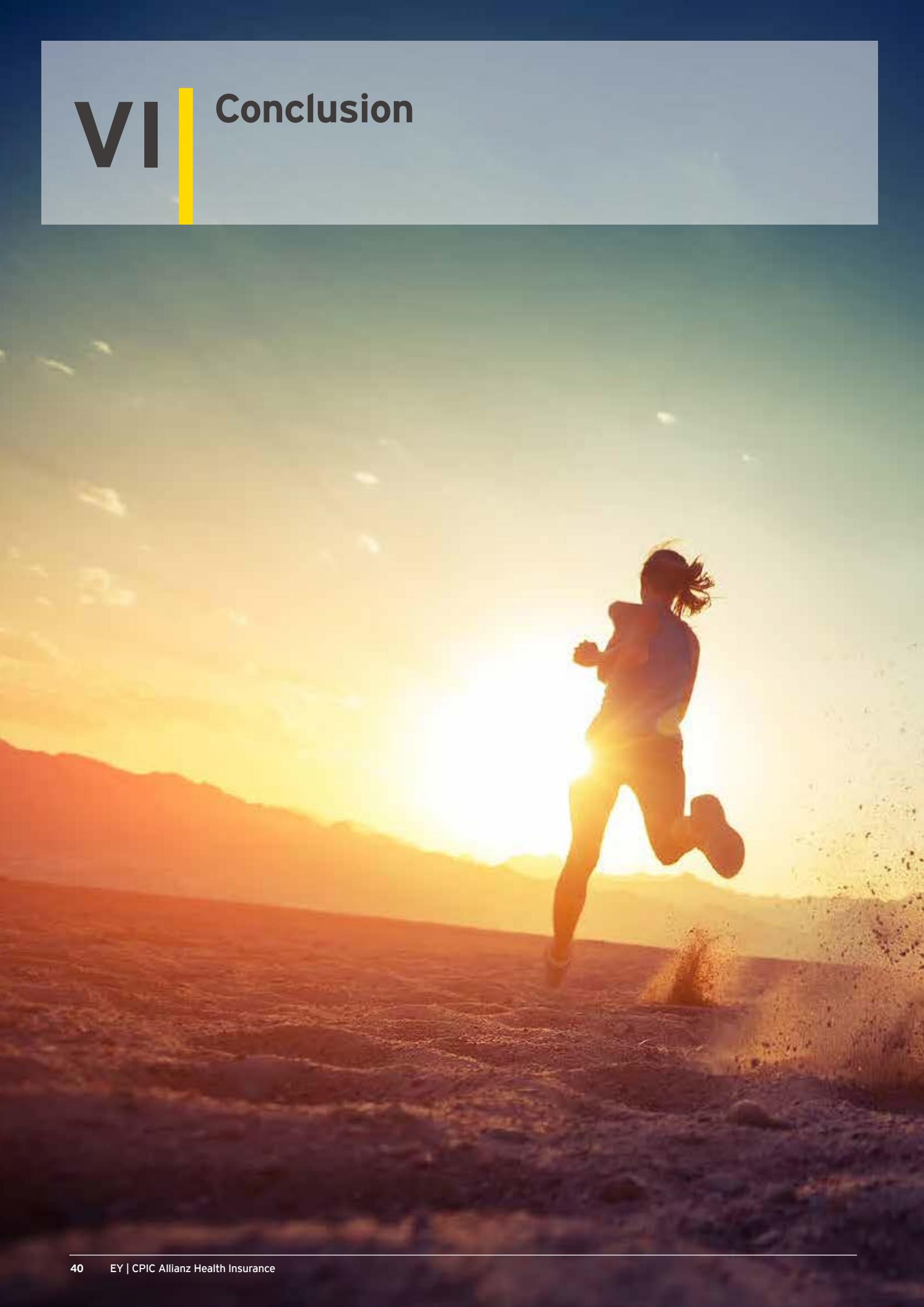
It took Oscar Health until the first quarter of 2018 to turn a profit. Since its inception, the company has invested heavily in rapid expansion. But, with its membership more than doubling in 2017 and with its narrow-network strategy, strict control of membership admittance standards and precision pricing, Oscar Health is poised for success.

Figure 41: Oscar insurance plan interface

The screenshot shows the Oscar insurance plan interface with a teal header. The main content area displays four insurance plan options: Bronze, Silver, Gold, and Platinum. Each plan includes a brief description and a link to "View Details". Below the plans, there is a section titled "Basic" with a link "Get an quote with the basic plan". At the bottom, there are four buttons: "Individual", "Family", "Small Business", and "Large Business".

1 "Search," Oscar Health, <https://www.hioscar.com/>, 7 May 2018

# VI | Conclusion

A photograph of a person jogging on a dirt trail at sunset. The person is in mid-stride, facing away from the camera towards the horizon. The background features a range of mountains under a sky transitioning from blue to warm orange and yellow hues. The overall atmosphere is energetic and forward-moving.

The health insurance market has strong growth opportunities, backed by government policies, consumer demand and technological advances. Although the market faces internal and external challenges, these can be overcome by individual insurers: focusing on the customer, establishing dedicated operations with new business models, investing in emerging technologies and collaborating with the broader ecosystem.

This last point is critical – no one will succeed alone. To support the market as it strives to meet surging consumer demand for health insurance:

- ▶ **EY Advisory** will provide professional advisory services and act as a platform to connect all parties in the health ecosystem.
- ▶ **CPIC Allianz Health Insurance** will build a comprehensive health ecosystem jointly with all parties in Chinese health insurance ecosystem.

**Together, we can embrace innovation, new models and better ways of working to play our part in creating the ecosystem needed to build a “Healthy China”.**

# VII | EY commercial health insurance advisory service



# About EY

## EY Global

EY is a world leading professional service provider with over 250,000 employees in more than 760 offices covering more than 150 countries and areas. In FY17, its total global revenues were USD 31.4 billion, up 8% year-on-year. Over the years, EY has integrated its global and regional businesses most extensively and fully in line with economic globalization and regional development, so as to strengthen EY's ability to provide borderless and consistent superior professional services to its customers around the world. Within the Big Four, EY has the highest level of globalization and integration.

Figure 42: EY's global network



## EY China Advisory Team

Established in 2007, Ernst & Young (China) Advisory Limited has a global resource sharing environment and a local professional team to help many large and fast-growing Chinese companies, as well as multinationals operating in China, to understand their businesses and customers, providing them with effective and innovative solutions.

 **17,000+**  
employees in Greater China

 **3,228**  
employees for Greater China  
Business Advisory Services

 **27**  
branches and offices in  
Greater China

Note: Data as of 5 June 2018

## EY Insurance Advisory Team

EY Insurance Advisory Team has more than 15,000 professional insurance consultants worldwide, and EY is ranked as the world's best insurance advisory service provider. Combining professional knowledge and skills and our in-depth understanding of the market, the team works in close cooperation with multinational life, health, property, reinsurance companies, insurance intermediary institutions and insurance-related ecosystems.

“The world's best insurance advisory service provider.”

*Ranked by Kennedy Consulting Research & Advisory*

“Revenue and market share leader in global insurance advisory services.”

*Ranked by Gartner Research & Advisory Services*

Figure 43: EY Global Insurance Advisory Team

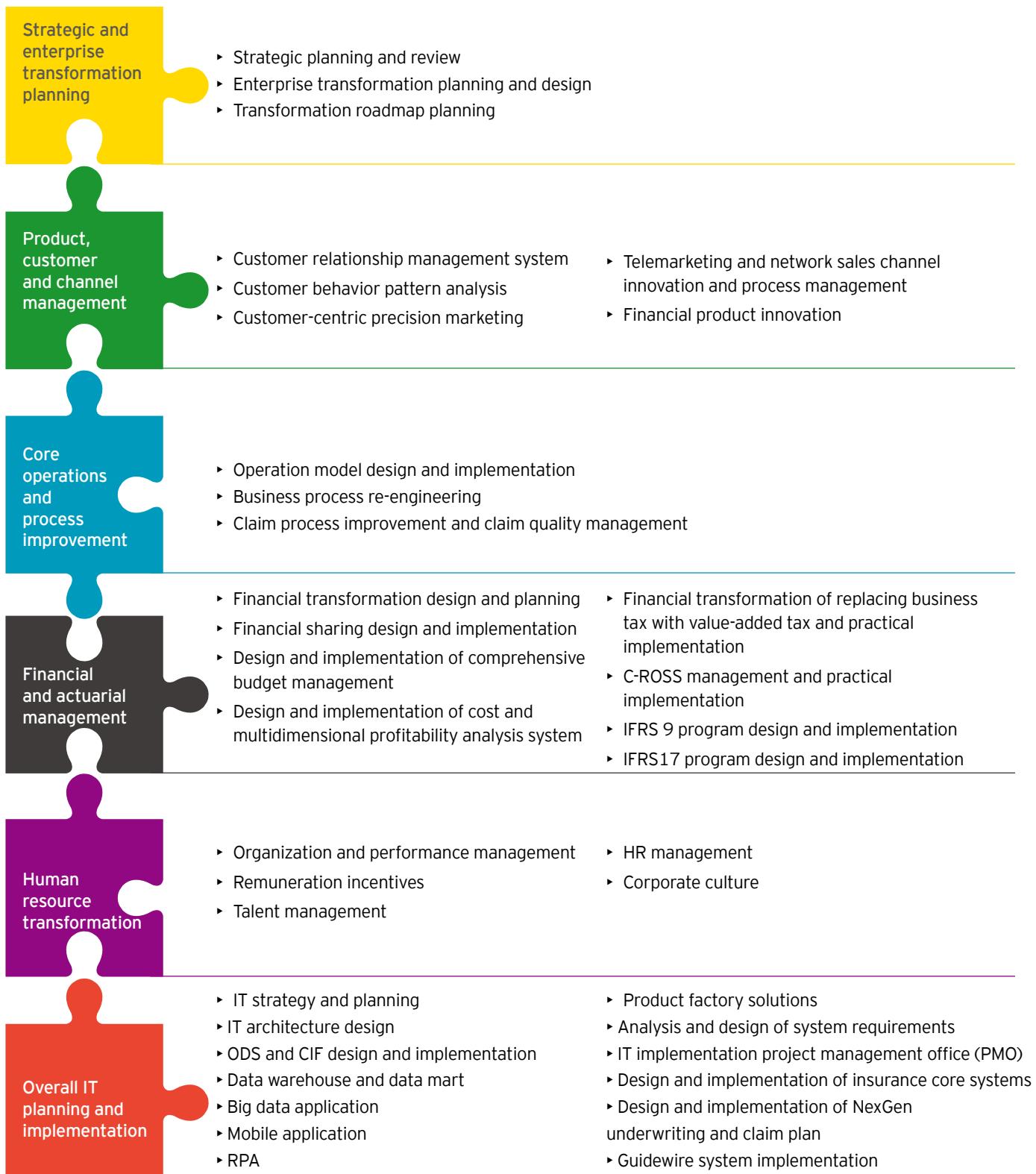
Life insurance | Health insurance | Property insurance | Reinsurance | Insurance intermediary | Insurance-related ecosystem



# EY Insurance Advisory Service

**EY provides "end-to-end" advisory services to insurance industry customers**

Figure 44: EY's insurance advisory services



# EY Health Insurance Advisory Service

In response to the market characteristics and business features of health insurance, EY has specially designed advisory service solutions for health insurance companies and related ecosystems, including:

## **Health insurance market access advisory**

This includes analyzing health insurance ecosystem operating conditions, capital cooperation and market development trends.

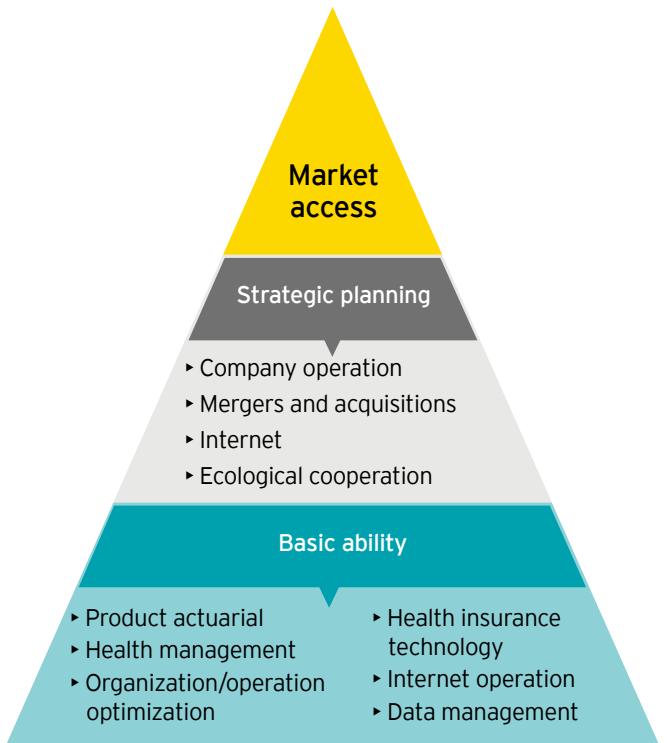
## **Health insurance strategy advisory**

It includes business strategy planning for health insurance companies, internet strategic planning, mergers and acquisitions as well as ecosystem cooperation strategic planning.

## **Health insurance basic ability advisory**

- **Product actuarial**, including health insurance product innovation and actuarial pricing advisory
- **Health insurance organization and operational optimization advisory**, including professional advisory on health insurance organization and construction, as well as professional advisory on optimizing internal operations
- **Digital operations advisory**, including online model design, and robo-advisor planning and implementation for health insurance
- **Health management advisory**, including health management industry analysis, health management platform planning and implementation
- **Health data management advisory**, including customer behavior and medical data management analysis based on big data and artificial intelligence
- **Health insurance technology advisory**, including planning and implementing IT core systems, new technology applications, and network information security

Figure 45: EY's Health Insurance Advisory Services



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## About CPIC Allianz Health Insurance

CPIC Allianz Health Insurance is a member of China Pacific Insurance (Group) Co. Ltd. (hereinafter referred to as "CPIC"), and was jointly established by CPIC and German Allianz SE, two top 500 companies in the world.

CPIC Allianz Health Insurance is committed to health and care, and provides comprehensive health insurance security and health management services for individuals and groups. Relying on CPIC's exuberant sediment rooted in China marketplace, especially for its vast customer resources and extensive distribution networks, and combined with the extraordinary expertise advantages of Allianz Group, CPIC Allianz Health Insurance seeks to become a professional health insurance company, which leads the domestic industry and continually creates health values for customers.

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**EY | Assurance | Tax | Transactions | Advisory**

## About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

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